imageRUNNER™
330/400

SERVICE MANUAL

REVISION 0

Canon

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Prepared by

OFFICE IMAGING PRODUCTS TECHNICAL SUPPORT DEPARTMENT 1
OFFICE IMAGING PRODUCTS TECHNICAL SUPPORT DIVISION

CANON INC.

5-1, Hakusan, 7-chome, Toride-City, Ibaraki-Pref., 302-8501, Japan

Prepared by
Office Imaging Products Technical Support Dept.1
Office Imaging Products Technical Support Div.
Office Imaging Products Quality Assurance Center.
CANON INC.
Printed in Japan

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5-7, Hakusan, 7-chome, Toride-City, Ibaraki-Pref., 302-8501, Japan

INTRODUCTION

The copier is a multi-function copier capable of serving as a copier, fax, and printer.

This Service Manual provides information needed to service the copier in the field. For information on technologies used in common with the existing copiers, refer to the "Copier Basic Series" as necessary.

This Service Manual consists of the following chapters:

Chapter 1	General Description introduces the copier's features and specifications, shows how to operate the copier, and explains how copies are made.
Chapter 2	Basic Operation provides outlines of the copier's various mechanical workings.
Chapter 3	Exposure System discusses the principles of operation used for the copier's lens drive unit and scanner drive unit. It also explains the timing at which these drive units are operated, and shows how they may be disassembled/assembled and adjusted.
Chapter 4	Image Formation System discusses the principles of operation used for the copier's image processing units. It also explains the timing at which the various units involved in image processing are operated, and shows how they may be disassembled/assembled and adjusted.
Chapter 5	Laser Exposure System discusses the principles of operation used for the copier's laser unit. It also explains the timing at which the unit is operated, and shows how they may be disassembled/assembled and adjusted.
Chapter 6	Image Formation System discusses the principles of how images are formed. It also explains the timing at which the various units involved in image formation are operated, and show how they may be disassembled/assembled and adjusted.
Chapter 7	Pick-Up/Feeding System explains the principles of picking up and feeding copy paper in view of the functions of electrical and mechanical units used to move copy paper and in relation to their timing of operation. It also shows how these units may be disassembled/assembled and adjusted.
Chapter 8	Side Paper Deck explains the principles of operation used from when paper is picked up to when copies are delivered. It also explains the timing at which various drive units are operated, and shows how they may be disassembled/assembled and adjusted.
Chapter 9	Fixing System explains the principles used to fuse toner images to transfer media in view of the functions of electrical and mechanical units and in relation to their timing of operation. It also shows how these units may be disassembled/assembled and adjusted.
Chapter 10	Externals/Auxiliary Mechanisms shows the copier's external parts, and explains the principles used for the copier's various control mechanisms in view of the functions of electrical and mechanical units and in relation to their timing of operation. It also shows how these units may be disassembled/assembled and adjusted.
Chapter 11	Systems explains connections and specifications related to systems and shows how to disassemble and assemble them.
Chapter 12	Installation introduces requirements for the site of installation, and shows how the copier may be installed using step-by-step instructions.

Chapter 13	Maintenance and Servicing provides tables of periodically replaced parts and consumables/durables and scheduled servicing charts.
Chapter 14	Troubleshooting provides tables of maintenance/inspection, standards/adjustments, and problem identification (image fault/ malfunction).

Appendix contains a general timing chart and general circuit diagrams.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.

All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins, and be able to identify and isolate faults in the machine.

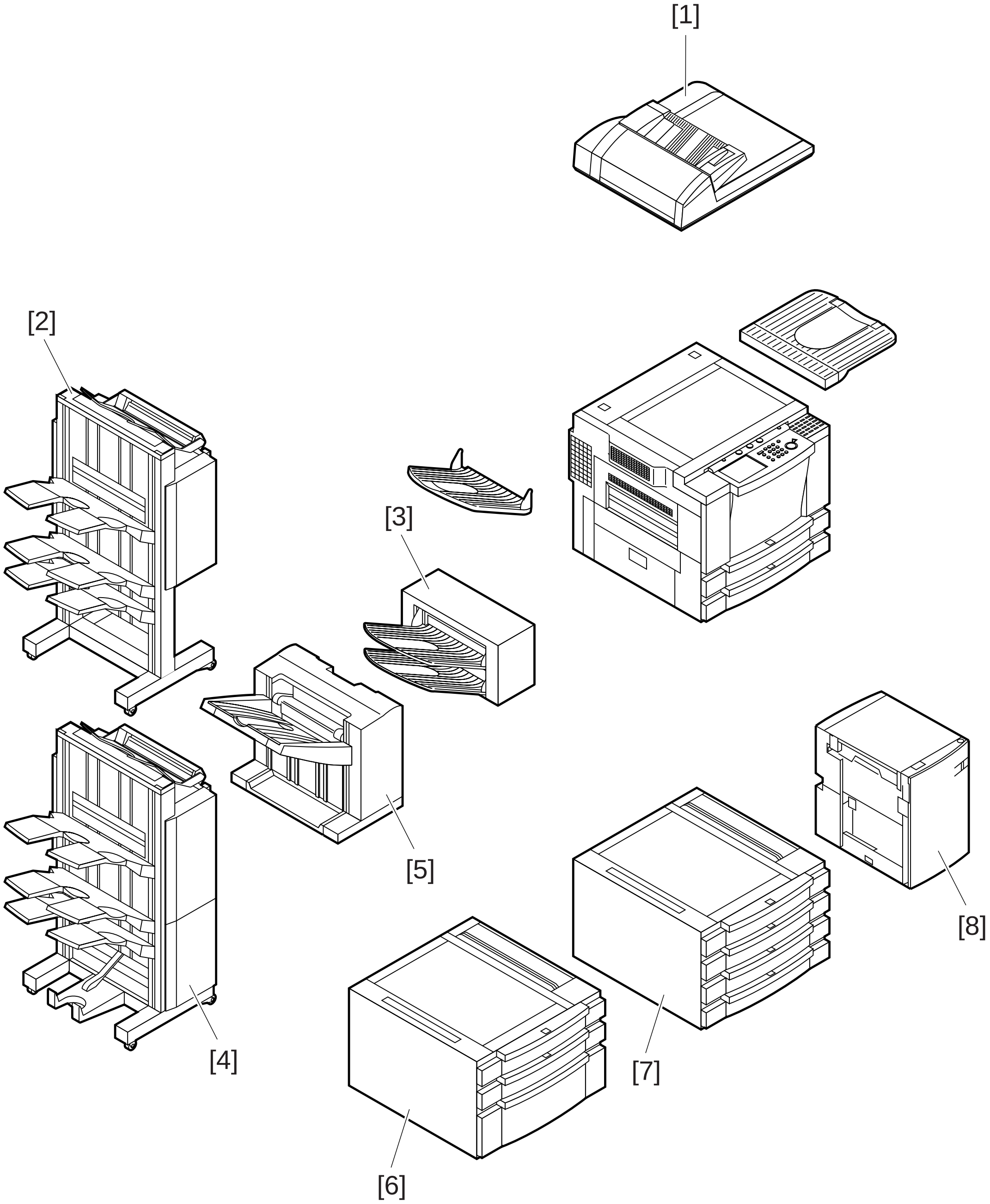
For a full understanding of the copier, this Service Manual should be used side by side with the separately available "Copier Basic Series." Refer to the descriptions in each of the following volumes:

Volume 1
Volume 2
Volume 3
Volume 4
Volume 5
Volume 6
Volume 7

System Configuration

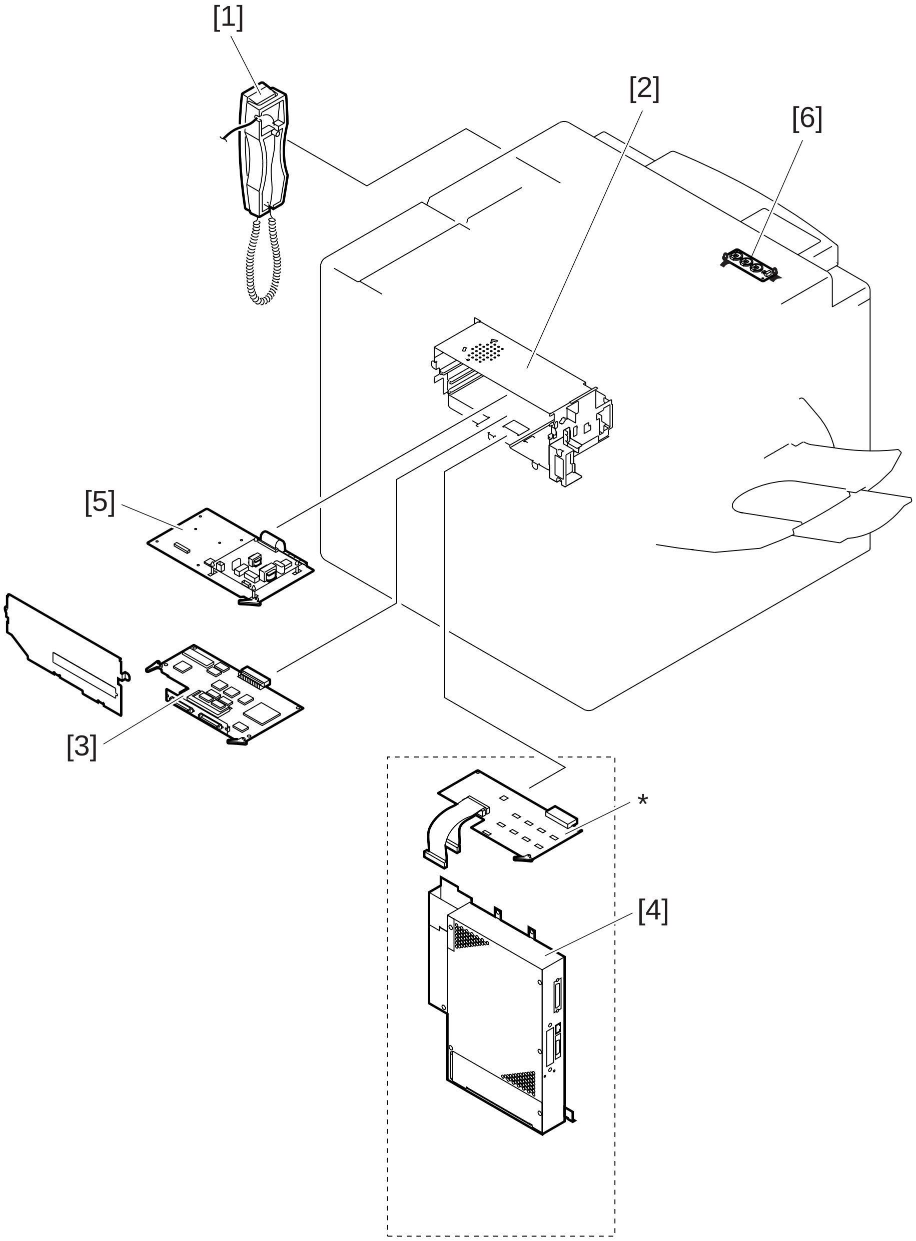
The copier may be configured with its accessories as follows:

- Pick-Up/Delivery Accessories



[1] DADF-A1
[2] Finisher-C1
[3] Multi Output Tray C1
[4] Saddle Finisher C2
[5] Finisher-E1
[6] Cassette Feeding Unit-S1
[7] Cassette Feeding Unit-R1
[8] Paper Deck-B1

■ System Accessories

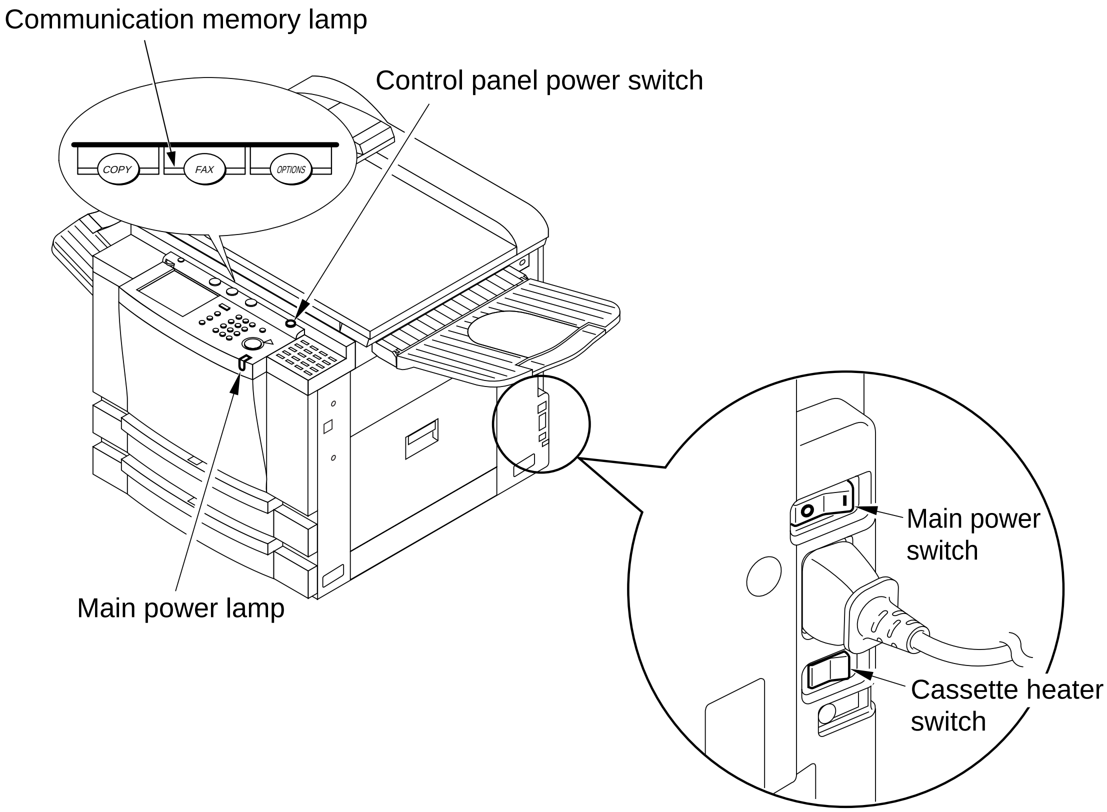


[1] Handset-C1 [120V ONLY]
[2] Expansion Board Base Unit-C1
[3] SCSI Interface Board-D1
[4] Printer Board
[5] Super G3 FAX Board
[6] Battery Board-A1
* PDL I/F Board.

When Turning Off the Main Power Switch

Be sure always to turn off the main power switch and disconnect the power plug before starting disassembly work. In addition,

1. When expanding the fax functions, the secondary battery used to retain fax memory images will start to operate as soon as the main power switch is turned off. Be sure to complete any work within one hour if the main power switch must be kept off. (Be sure also to keep the machine powered at least for one week after installation.)
2. The communication memory lamp on the control panel indicates the presence/absence of fax memory images. If it is on (indicating the presence of images), be sure to print out the images before turning off the main power switch and disconnecting the power plug.
3. Turing off the control panel power switch will not remove power from some units. Be sure always to turn off the main power switch before starting disassembly/assembly work.
4. The power will not be removed even when the front door is opened as long as the control panel power switch and the main power switch are both on.


Communication memory lamp
COPY
FAX
OPTIONS
Control panel power switch
Main power switch
Main power lamp
Cassette heater switch

Connectors for the Pick-Up/Delivery Accessories

When connecting accessories, be sure to use the connectors indicates in the diagram. If, for example, you connect the paper deck to the cassette pedestal connector and turn on the paper, the fuse on the paper deck PCB will blow, at times requiring replacement with a new PCB.

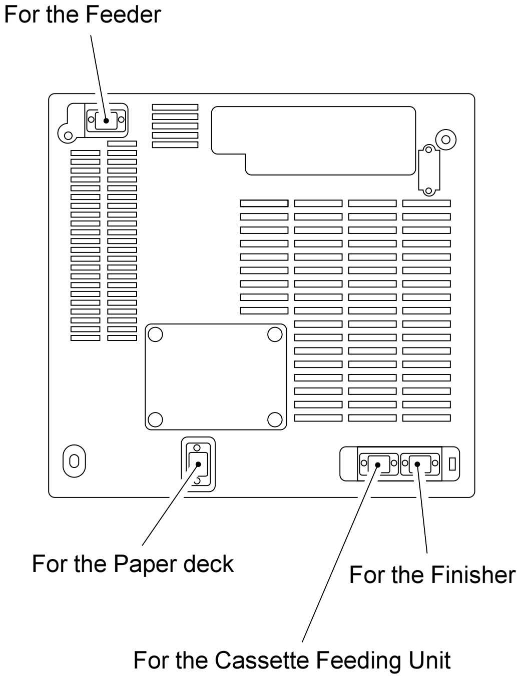

For the Feeder
For the Paper deck
For the Finisher
For the Cassette Feeding Unit

Figure. Rear View of the Body

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CHAPTER 1

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I. FEATURES

1. High-Speed, High-Image Quality

- Copy Speed:

405/400	40 ppm
335/330	33 ppm

- Resolution

Read in copier mode	600 x 600 dpi
Write in copier mode	1200-equivalent x 600 dpi
In fax mode	600 x 600 dpi (hyper GENESIS smoothing)

Gradation	256

2. Large-Capacity Image Memory

- The machine comes with a 32-MB image memory as standard, which may be expanded up to 96 MB.
- The use of an image memory has enabled making as many copies as needed with a single scan of an original, significantly improving the efficiency of copying work.

3. New No-Stacking Duplexing Mechanism

- Double-sided copies may be made without holding paper in the duplexing assembly, helping to improve the efficiency of copying work. The mechanism can turn out a large number of double-sided copies while limiting damage to the paper to a minimum.

4. Large-Capacity Paper Source

Adding accessories, the machine can be turned into a paper source holding as many as 5550 sheets.

2 cassettes (front loading; standard)	500 x 2
Multifeeder	50
Cassette Pedestal-S1	500 x 2
Paper Deck-B1	3500 (A4, B5)

5. Saddle Finisher w/ Book Binding Mode/Saddle Finisher (accessory)

- The saddle stitcher unit will prove its ability when producing booklets in book bind mode.
- The finishers unit is capable of stapling/sorting a total of 100 sets (193.6 mm high; 1300 A4 sheets of 80 g/m2).
- The finisher unit is capable of delivering as many as 50 sheets to the trays 1 through 3 (220.6 mm high; about 1500 sheets of 80 g/m^2) and the interrupt tray.
- The finisher unit is equipped with a job offset function to facilitate sorting work.
- The buffer path function ensures that the host copier's productivity will not be affected by the use of various finishing work.

II. SPECIFICATIONS

A. Type

Item	Specifications
Copier	Desktop
Copyboard	Fixed
Light source	Fluorescent lamp
Lens	Lens array
Photosensitive medium	OPC drum

B. Method

Item	Specifications
Copying	Indirect electrostatic copying
Charging	Roller charging (AC + DC)
Exposure	Laser exposure
Copy density adjustment	Automatic or manual
Development	Dry, single-component, toner projection
Pick-up	Cassette: Retard method (center reference)
	Multifeeder: Dupro-method (center reference)
Transfer	Roller charging (DC)
Separation	Static (static eliminator) + curvature
Cleaning	Cleaning blade
Fixing	Heating roller

C. Performance

Resolution		600 x 600 dpi (reading) 600 x 600 dpi (during output; by smoothing, 200-equivalent x 600 dpi)
Gradation		256 gradations
Original type		Sheet, book, 3-D object (2 kg max.)
Maximum original size		A3 (297 x 420 mm)/297 x 432 mm (11"x17") max.
Copy size	AB	6R6E
	Inch	5R5E
	A	3R4E
	AB/Inch	6R6E
Zoom		25% to 800% (in 1% increments)
	Auto	Provided
	XY independent zoom	Provided
Wait time (20°C)		From main power supply 77 sec or less From sleep state 77 sec or less From power save mode Without recovery time 0 sec -10% mode 9 sec or less -25% mode 20 sec or less -40% mode 33 sec or less
First copy time		6.0 sec or less (topmost cassette, Direct, A4/LTR, auto density adjustment, no pre-scanning)
Continuous copying		1 to 999 copies
Copying speed		See Table 1-201.
Copy size	Cassette	A3 (297 x 420 mm)/297 x 432 mm (11"x17") to A5 (STMT)
	Multifeeder	A3 (297 x 420 mm)/297 x 432 mm (11"x17") to postcard
	Double-sided	A3 (297 x 420 mm)/297 x 432 mm (11"x17") to A5 (STMT)
Copy paper type	Cassette	Plain paper, recycled paper, eco paper (64 to 80 g/m^2)
	Multifeeder	Plain paper, recycled paper, eco paper, transparency, colored paper, postcard, label, thick paper, tracing paper (64 to 128 g/m^2)
	Double-sided	Plain paper, recycled paper eco paper
Cassette specifications	Claw	Not used
	General/ universal	500 sheets (average; of 80 g/m^2)

		Item	Specifications
Multifeeder tray		50 sheets	80 g/m^2
Copy tray		100 sheets	80 g/m^2
Non-image width	Leading/ trailing edge	2.5 mm	
	Left/right	2.5 mm	
Auto clear		Provided	2 min standard; may be varied between 0 and 9 min.
Auto sleep time		Provided	10 min to 8 hr

D. Paper Deck-B1

Item	Specifications
Pick-up	No claw (retard) method
Paper holder	Side tray method
Copy paper type	• Plain paper (65 to 80 g/m^2) A4, B5, LTR • Colored paper (Canon-recommended) A4
Paper holding capacity	385 mm high (3500 sheets of 80 g/m^2)
Serial number	A4 ZSKxxxxx LTR ZSLxxxxx
Paper size switching	Shifting the size guide plate and setting in service mode (OPTION>ACC>**DK-P**)
Dimensions	(not including protrusions/grip cover, rail)
Weight	31 kg (approx.; body)/10 kg (approx.; rails)
Power supply	By copier (DC power)
Operating environment Temperature Humidity	Same as copier

The above specifications are subject to change for product improvement.

E. Others

Item			Specifications	
Operating environment	Temperature		7.5 to 32.5°C	
	Humidity		5 to 85%	
	Atmospheric pressure		810 to 1013hPa (0.8 to 1.0)	
Power supply			405/400	335/300
	120V (USA)		400E NNUxxxxx 400S NNVxxxxx	300E NNXxxxxx 300S NNYxxxxx
	230V (Italia)		405 PNYxxxxx	335 PNZxxxxx
	230V (Others)		405 PNWxxxxx	335 PNXxxxxx
	230V (UK)		405 QNYxxxxx	335 QNZxxxxx
	230V (CA)		405 RNXxxxxx	335 RNYxxxxx
	230V (FRN)		405 SNYxxxxx	335 SNZxxxxx
	230V (GER)		405 TNYxxxxx	335 TNZxxxxx
	230V (AMS)		405 UNYxxxxx	335 UNZxxxxx
Power consumption* (reference only; at time of 23°C and at rated input; for the copier, actual measurement)			w/o FAX expansion	
	Copying		910W	
	Standby		193W	
	Sleep 1		190W	
	Sleep 2	No recovery time	190W	
		-10%	170W	
		-25%	143W	
		-40%	116W	
	Sleep 3		69W	
Noise	Copying		71 dB or less (by sound power level, Impulse mode)	
	Standby		50 dB or less (by sound power level, Impulse mode)	
Ozone			0.01 ppm or less in average; 0.02 ppm or less at max.	
Dimensions	Width		585mm	
	Depth		720mm	
	Height		538mm	
Weight			97.5 kg or less (w/DADF-A1) 83.4 kg or less (w/o DADF-A1)	
Consumables	Copy paper		Keep wrapped to avoid humidity.	
	Toner		Avoid direct sunshine; store at 40°C, 85%.	

* With expanded fax functions maximum + 12W
With expanded printer functions maximum + 37W

F. Default Ratios

Country	Reduction		Enlargement	
Japan, Australia, others (6R6E)		0.250	B4→A3 B5R→A4R B5→A4	1.153
		0.500	A4R→B4 A5→B5	1.223
	A3→B5	0.611	A4RA3 B5RB4	1.414
	A3→A4R B4→B5R	0.707	A5A3	2.000
	B4→A4R	0.815		4.000
	A3→B4 A4R→B5R	0.865		8.000
North America (5R5E)		0.250	LGL→11x17	1.214
		0.500	LTRR→11x17	1.294
	11x17→LTRR	0.647	STMT→LTRR	2.000
	11x17→LGL	0.733	STMTR→11x17	4.000
	LGL→LTRR	0.786		8.000
Europe (3R4E)		0.250	A4R→A3	1.414
		0.500	A5→A3	2.000
	A3→A4R	0.707		4.000
				8.000

Table Dafault Reproduction Ratios

G. Copying Speed

Mode		Size	Copy size	405/400 (copies/min)	335/330 (copies/min)
Direct		A3 A4 A4R A5 A5R B4 B5	A3 A4 A4R A5 A5R B4 B5	19 40 28 40 40 22 40	19 33 28 33 33 22 33
Reduce	II	A3→A5	A5R	40	33
	III	A3→B5	B5R	33	33
	IV	A3→A4 B4→B5	A4R B5R	28 33	28 33
	V	B4→A4 B5→A5	A4R A5	28 40	28 33
	VI	A3→B4 A4→B5	B4 B5	22 40	22 33
Enlarge	II	A5→A3	A3	19	19
	III	A4→A3 B5→B4	A3 B4	19 22	19 22
	IV	A4→B4 A5→B5	B4 B5	22 40	22 33
	V	B4→A3 B5→B4	A3 B4	19 22	19 22

Feeder used, delivery to copy tray, auto paper select used, density auto adjust used, non-sort mode, topmost cassette used, no data in memory.

Table 1-201 Copying Speed (copier only)

Ratio	Size	405/400 Copies/min	335/330 Copies/min
DIRECT	LTR	40	33
	11x17	19	19
	LGL	23	23
	LTRR	30	30
	STMT	40	33
	STMTR	40	33
REDUCE	LGL→LTRR	30	30
	11x17→LGL	23	23
	11x17→LTRR	30	30
	11x17→STMTR	40	33
	11x15→LTRR	30	30
ENLARGE	LGL→11x17	19	19
	LTRR→11x17	19	19
	STMTR→11x17	19	19

The above specifications are subject to change for product improvement.

III. NAMES OF PARTS

A. External view

- Model with DADF-A1 as Standard

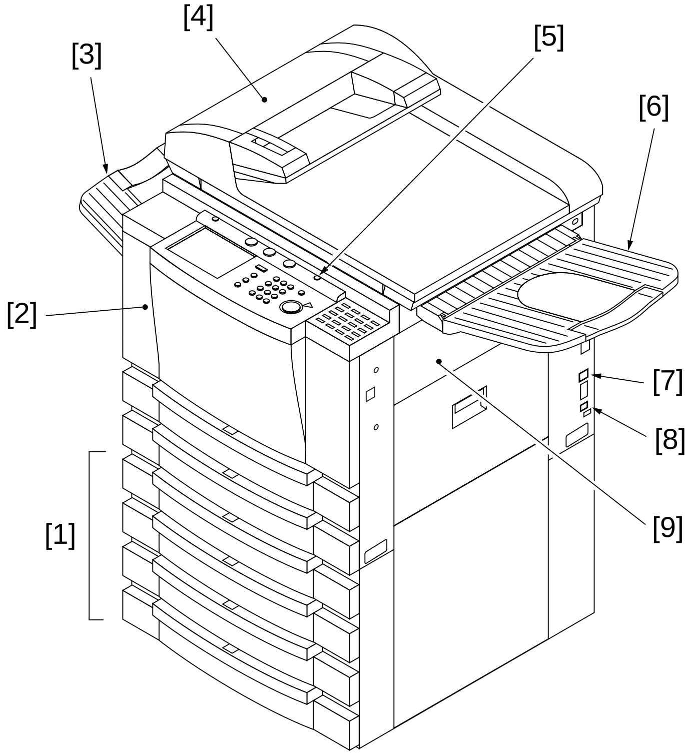


Figure 1-301

[1] Cassette Feeding Unit-R1 (accessory)	[6] Original delivery tray (for feeder)
[2] Front cover	[7] Multifeeder
[3] Copy tray	[8] Main power switch
[4] DADF-A1	[9] Cassette heater switch (accessory)
[5] Control panel power switch	

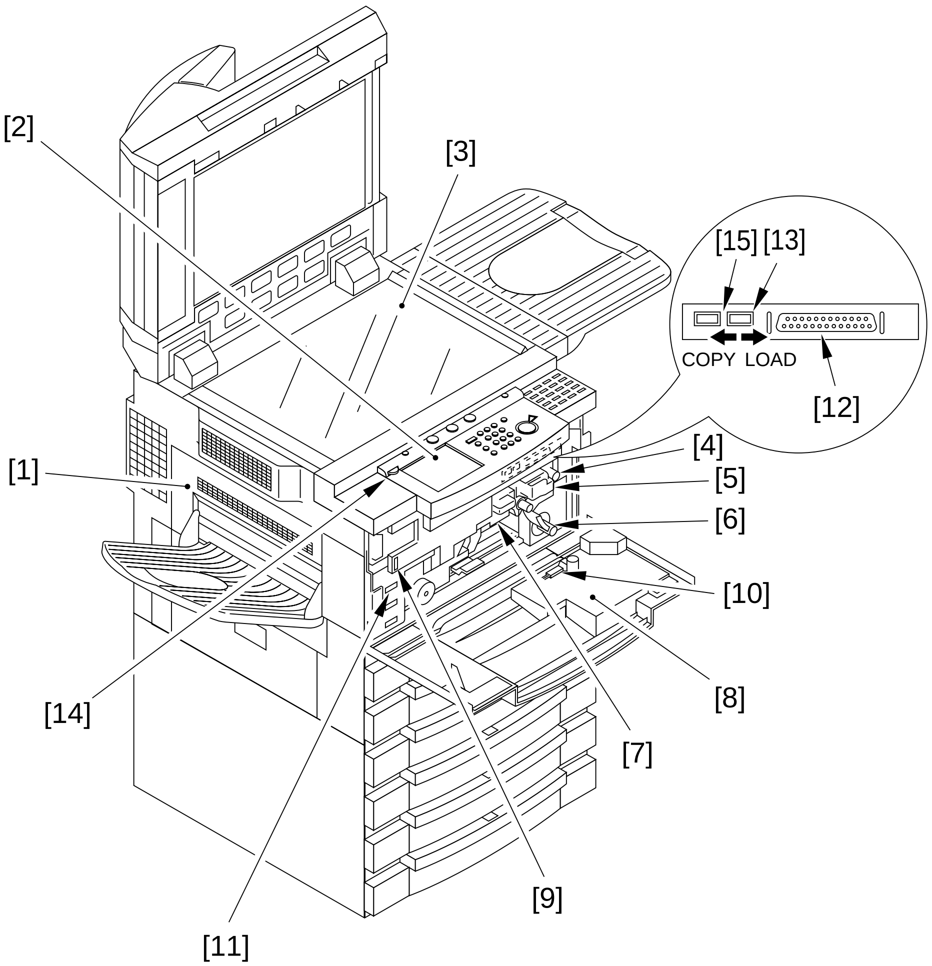


Figure 1-302

[1] Delivery assembly cover	[10] Static eliminator cleaning tool
[2] Control panel	[11] Total copy counter
[3] Copyboard glass	[12] Downloading connector (bi-Centronics)
[4] Developing assembly releasing lever	[13] Downloading switch Left: for downloading Right: for copying
[5] Developing assembly	[14] LCD contrast adjustment
[6] Feeding assembly releasing lever	[15] Not used
[7] Drum unit	
[8] Service documentation case	
[9] Door switch assembly	

B. Cross Section

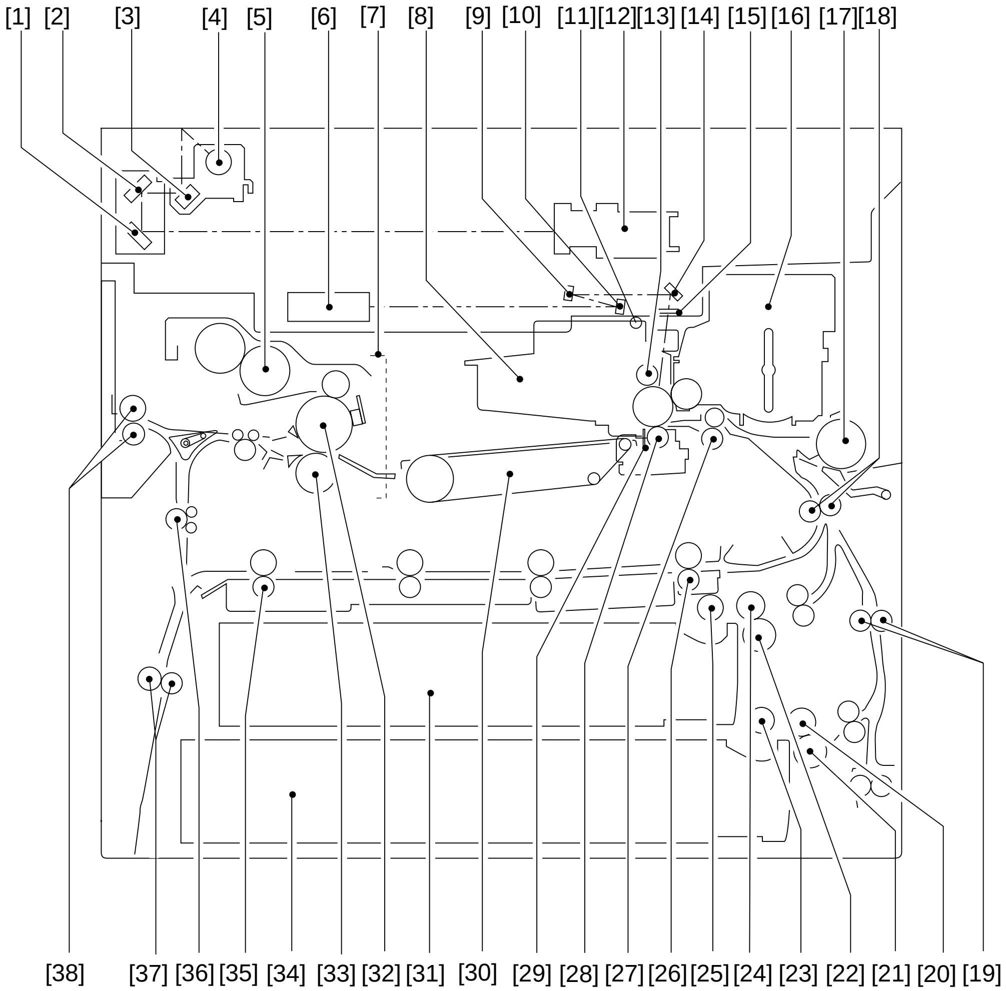

[1]
[2]
[3]
[4]
[5]
[6]
[7]
[8]
[9]
[10]
[11]
[12]
[13]
[14]
[15]
[16]
[17]
[18]
[38]
[37]
[36]
[35]
[34]
[33]
[32]
[31]
[30]
[29]
[28]
[27]
[26]
[25]
[24]
[23]
[22]
[21]
[20]
[19]

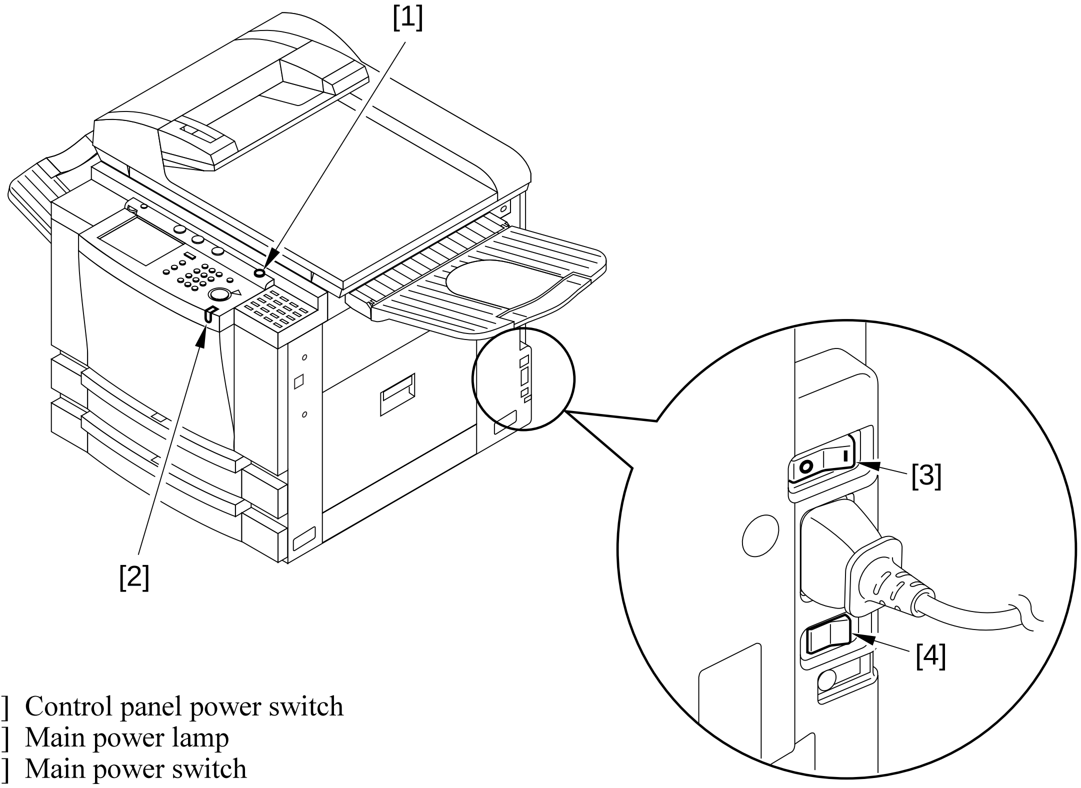
Figure 1-303

[1] No. 3 mirror
[2] No. 2 mirror
[3] No. 1 mirror
[4] Scanning lamp (fluorescent lamp)
[5] Cleaning belt assembly
[6] Laser unit
[7] Fixing unit
[8] Drum cartridge
[9] Bending mirror 2
[10] Bending mirror 1
[11] Pre-exposure lamp
[12] CCD unit
[13] Primary charging roller
[14] Bending mirror 3
[15] Dust-proofing glass
[16] Developing assembly
[17] Multifeeder pick-up roller
[18] Vertical path roller 1
[19] Vertical path roller 2
[20] Cassette 2 feeding roller
[21] Cassette 2 separation roller
[22] Cassette 1 separation roller
[23] Cassette 2 pick-up roller
[24] Cassette 1 feeding roller
[25] Cassette 1 pick-up roller
[26] Duplexing assembly outlet roller
[27] Registration roller
[28] Transfer roller
[29] Static eliminator
[30] Feeding assembly
[31] Cassette 1
[32] Upper fixing roller
[33] Fixing assembly locking roller
[34] Cassette 2
[35] Duplexing assembly inlet roller
[36] Reversal feeding roller 2
[37] Reversal feeding roller 1
[38] Delivery roller

IV. OPERATION

A. Turning On the Power

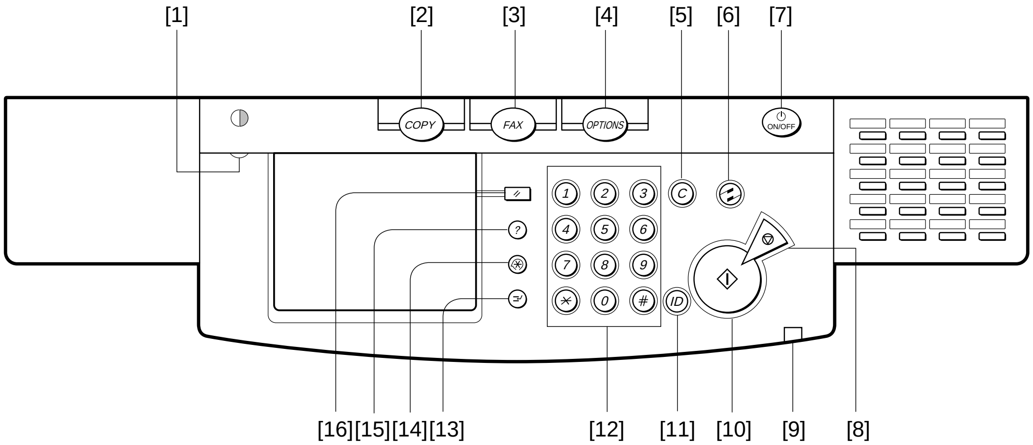
The machine is equipped with two power switches: main power switch and control panel power switch. To turn on the machine, be sure to turn on the main power switch an then the control panel switch in sequence.



[1] Control panel power switch
[2] Main power lamp
[3] Main power switch
[4] Cassette heater switch (accessory)

Figure 1-401

B. Control Panel


[1]
[2]
[3]
[4]
[5]
[6]
[7]
COPY
FAX
OPTIONS
ON/OFF
1
2
3
4
5
6
7
8
9
0
#
C
ID
[16][15][14][13]
[12]
[11]
[10]
[9]
[8]

[1] Display contrast control
[2] COPY key
[3] FAX key
[4] OPTIONS key**
[5] CLEAR key
[6] ENERGY SAVER key
[7] Control panel power
[8] STOP key
[9] Power indicator*
[10] START key
[11] ID key
[12] Number keys
[13] INTERRUPT key
[14] ADDITIONAL FUNCTIONS key
[15] GUIDE key
[16] RESET key

Figure 1-402

* Turns on when the main power switch is on.
** 120V PRINT • I/F Key.

C. Special Features Modes

Mode	Description
TWO-PAGE SEPARATION	Use it to copy two facing pages of a book on two separate sheets.
TRANSP.INTERLVING	Use it to insert a single sheet of paper between transparency copies.
SHIFT	Use it to shift the image of an original to a desired area on a copy.
OVERLAY	Use it to copy two originals on a single sheet.
DIF.SIZE ORIGINAL	Use it when setting originals of different sizes (but of the same width) in the feeder.
BOOKLET	Use it to make copies of multiple originals for production of a booklet.
MARGIN	Use it to create a margin for binding along the side of a copy.
FRAME ERASE	Use it to erase the shadow or images of frames and holes from a copy.
IMAGE COMB.	Use it to reduce two, four, or eight originals automatically for copying on a single sheet.
IMAGE SEPARATION	Use it divide a single image in two or four and enlarge them automatically for copying on one side or two sides of a sheet of a specific size.
NEGA/POSI	Use it to reverse black and white images.
SHARPNESS	Use it to obtain a crisp black-and-white image.
MODE MEMORY	Use it to store or recall copying modes.
RECALL	Use it to call up the most recent three copying modes for copying.

D. Additional Functions

custom common setting	INITIAL FUNCTION	Use it to select the Initial screen, which comes up when the power is turned on. (copier*/fax)
	AUTO CLEAR SETTING	Use it to enable or disable the display of the Initial screen after auto clear. (enable*/disable)
	SYSTEM DIFF SIZE ORIGINAL	Use it to enable or disable the placement of originals of different sizes (sub feeding direction) in the feeder. (on*/off)
	AUDIBLE TONES	Use it to enable or disable the buzzer sound. (on for input, warning, job end)
	DRAWER ELIGIBILITY FOR APS/ADS	COPY/FAX/PRINTER (Stack Bypass: ON, OFF* Drawers: ON*, OFF)
	TRACINGPAPER CASETTE SETTINGS	Use it to enable/disable cassette auto select for each cassette. (for copier, fax, printer; multifeeder on/off*; cassette on*/off)
	STORE SPECIAL CASETTE	Use it to set a paper size and paper icon □ for the special cassette. Setting the thick paper icon will turn on thick paper mode for transfer bias and fixing control. SPC1, SPC2: A4 SPC3, SPC4: LTR
	STACK BYPASS SIZE ENTRY	Use it enable or disable size input. off*: input of size as needed. on: input of size upon placement of paper in the multifeeder.
	TRAY	Use it to assign the multi tray and finisher special tray to a function: Multifeeder tray A: copier; tray B: fax, tray C: not set finisher tray A: not set; tray B: fax
	PRINTING PRIORITY	Use it to assign priority (1, 2, 3) for printing when a sorter is installed. copier: 1; fax: 2; printer: 3 (1, 2, 3 representing priority)
	ENERGY SAVER MODE	Use it to set the level of power save mode. -10% mode, -25% mode, -40% mode; no recovery time
	INCH ENTRY	Use it to enable or disable the display of the Inch key for screens. (on/off*)
	SET SYSTEM SETTING PASSWORD	Use it to set an ID for system control. (4-digit number)
	RESTRICT USE OF FAX WITH CONTROL CARD	Use it to enable or disable restriction on fax users by means of control cards (accessory). (on/off*)

* Initial setting.

	INITIAL SCREEN FOR EXPANDED FUCTIONS	MAIL BOX*, OTHER
	DEPT. ID MANAGEMENT	Use it to enable or disable ID control by group. (using a 4-digit number for each group for count control)
	INITIALIZE CUSTOM COMMON SETTINGS	Use it to initialize common settings to factory settings. (yes/no)
timer settings	date/time setting	Use it to set the current date and time.
	auto sleep time	Use it to set the time after which sleep state starts at the end of operation and turning off the control panel power switch. (30 min to 24 hr; 2 hr*)
	auto clear time	Use it to set the time after which the Copier/FAX Initial screen returns to the touch panel at the end of operation.
	time until unit quiets down	Use it to set the time after which the machine sound is stopped at the end of a copy run or key operation. (0 to 9 min; 1*)
	weekly timer	Use it to set the time at which the control panel power switch is turned off by the day of the week. (no setting)
custom copy settings	standard key 1 setting	Use it to set the Preference key for the Initial screen. Select from the mode keys on the Extended mode screen and the memory keys from the mode memory.
	standard key 2 setting	Use it to set the Preference key for the Initial screen. Select from the mode keys on the Extended mode screen and the memory keys from the mode memory.
	auto orientation	Use it to enable or disable automatic rotation of an image based on original size and copy ratio for printing on paper of a selected size. (on*/of)
	auto collate	Use it to enable or disable switching to sort mode automatically when an original is placed in an RDF (operates in conjunction with sorter and RDF). (on*/off)
	photo mode	Use it to enable or disable photo mode. (on*/off)
	standard settings	Use it to enable switching copying modes stored in memory for standard modes. (enable/disable) standard: combination of modes set at power-on or a press on the Reset key. (copy count: 1; paper select: auto; density/image: auto)
	initialize custom common setting	Use it to initialize copy setting to factory settings. (yes/no)

* Initial setting.

adjustment/ cleaning	zoom fine adjustment	Use it to correct minute discrepancies between original and copy sizes for vertical and horizontal directions. adjustment range: -1.0% to +1.0% unit: 0.1%
	exposure recalib	Use it to adjust copy density for copier made of a typical original (without dirt or fogging) with the density memory at center.
	feeder cleaning	Use it to clean the pick-up roller assembly by moving copy paper inside the feeder.
	roller cleaning	Use it to clean the roller assembly (if copies are soiled).
	repositioning staples for saddle sticher unit	Use it to edge out several staples by feeding paper to the middle stapling unit after removing a staple jam.
	saddle sfich position adjustment	Use it to correct minute discrepancies in middle stapling positions when making copies for a booklet (operating in conjunction with a saddle finisher).
image server custom settings	mail box registration	Box No. Name (up to 24 letters), Password (4 digits), Amount of time to elapse before automatic deletion.

* Initial setting.

V. ROUTINE MAINTENANCE BY THE USER

Be sure to instruct the user to perform the following once a week:

1) Wipe the copyboard glass with a moist cloth, and then dry wipe it.
2) Wipe the copyboard cover/DADF feeding belt with a cloth moistened with mild detergent solution, and then dry wipe it.

Instruct the user to perform the following if image faults (e.g., vertical white spots) occur:

1) Execute charging roller/transfer roller cleaning in user mode.
2) Clean the separation static eliminator.

VI. SAFETY

A. Safety of Laser Light (CLASS 1 LASER PRODUCT)

The machine is certified as a Class I product under the Radiation Performance Standards of the United States Department of Health and Human Services (DHHS) established in 1968.

The certification means that the machine is a laser product which will not emit harmful laser light.

Its laser system is completely contained inside a protective housing and inside external covers so that its beam will not escape during normal use.

B. CDRH Regulations

The Center for Devices and Radiological Health (CDRH) of the United States Food and Drug Administration put into force regulations concerning laser products on August 2, 1976.

The regulations apply to laser products manufactured on and after August 1, 1976, and the sale of laser products without certification is prohibited within the United States.

Figure 1-602 shows the label certifying compliance with the CDRH regulations, and all laser products sold in the United States are required to bear the label.

CANON
30-2, SHIMOMARUKO, 3-CHOME, OHTAKU, TOKYO,
146, JAPAN.

MANUFACTURED:

THIS PRODUCT CONFORMS WITH CQRH RADIATION
PERFORMANCE STANDARD 21CFR CHAPTER 1
SUBCHAPTER J.

Figure 1-601

Caution:

Some models may carry a label with a different text description.

C. Handling the Laser Unit

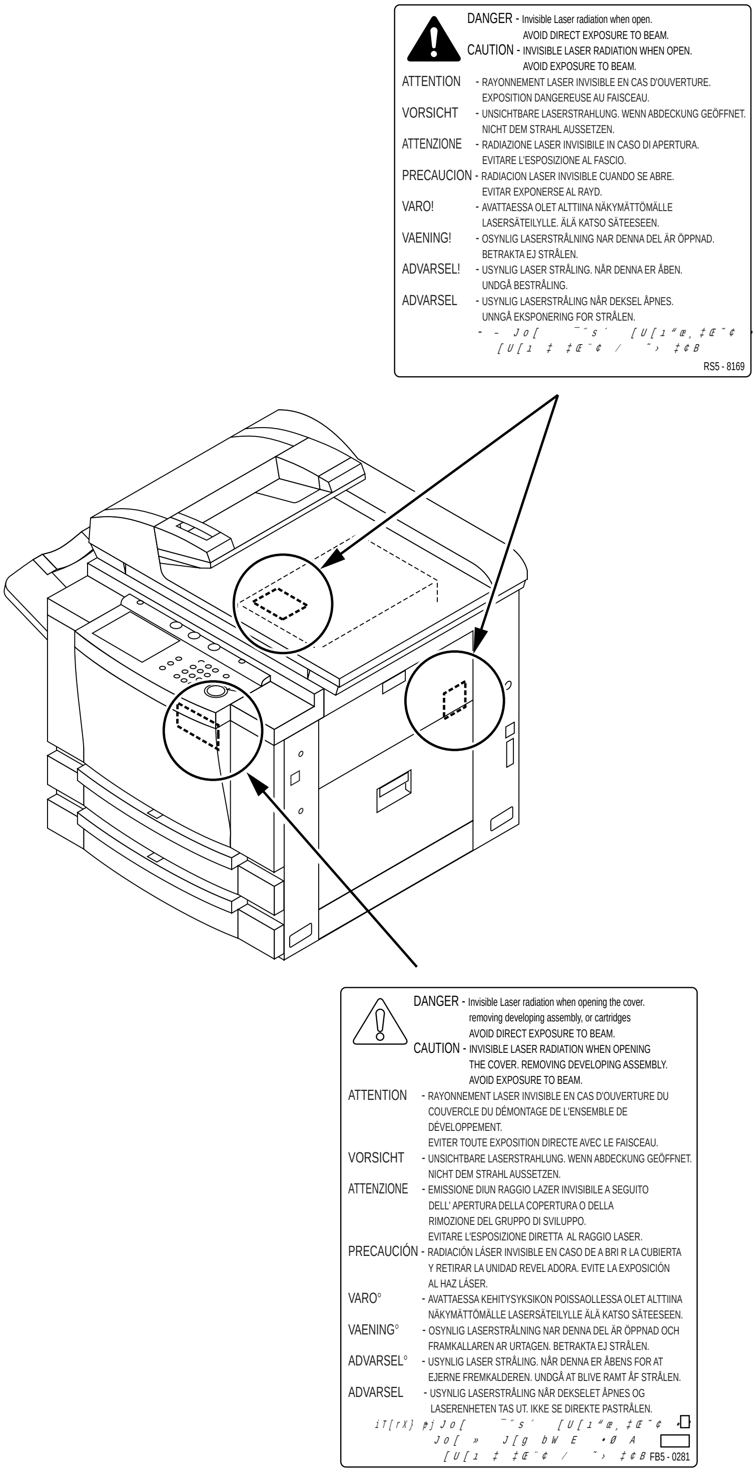
When servicing the area around the laser unit, take extra care not to insert a screwdriver or the like (with a high reflectance) into the laser path.

Be sure also to take off watches and rings (they will reflect the laser beam, in some cases damaging the eye).

The machine's laser beam is ultrared light. The covers that can reflect a laser beam are identified by the label shown in Figure 1-602.

Exercise care when serving areas behind these covers.

This label is attached to a laser unit cover which shields agianst laser light.



DANGER - Invisible Laser radiation when open.
AVOID DIRECT EXPOSURE TO BEAM.
CAUTION - INVISIBLE LASER RADIATION WHEN OPEN.
AVOID EXPOSURE TO BEAM.
ATTENTION - RAYONNEMENT LASER INVISIBLE EN CAS D'OUVERTURE.
EXPOSITION DANGEREUSE AU FAISCEAU.
VORSICHT - UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET.
NICHT DEM STRAHL AUSSETZEN.
ATTENZIONE - RADIAZIONE LASER INVISIBILE IN CASO DI APERTURA.
EVITARE L'ESPOSIZIONE AL FASCIO.
PRECAUCION - RADIACION LASER INVISIBLE CUANDO SE ABRE.
EVITAR EXPONERSE AL RAYD.
VARO! - AVATTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE
LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VAENING! - OSYNLIG LASERSTRÅLNING NAR DENNA DEL ÄR ÖPPNAD.
BETRAKTA EJ STRÅLEN.
ADVARSEL! - USYNLIG LASER STRÅLING. NÅR DENNA ER ÅBEN.
UNDGÅ BESTRÅLING.
ADVARSEL - USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES.
UNNGÅ EKSPONERING FOR STRÅLEN.
- – Jo[¯˝s´ [U[ı“œ¸‡Œ˜¢
[U[ı ‡ ‡Œ¨¢ / ˜› ‡¢B
RS5 - 8169

DANGER - Invisible Laser radiation when opening the cover.
removing developing assembly, or cartridges
AVOID DIRECT EXPOSURE TO BEAM.
CAUTION - INVISIBLE LASER RADIATION WHEN OPENING
THE COVER. REMOVING DEVELOPING ASSEMBLY.
AVOID EXPOSURE TO BEAM.
ATTENTION - RAYONNEMENT LASER INVISIBLE EN CAS D'OUVERTURE DU
COUVERCLE DU DÉMONTAGE DE L'ENSEMBLE DE
DÉVELOPPEMENT.
EVITER TOUTE EXPOSITION DIRECTE AVEC LE FAISCEAU.
VORSICHT - UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET.
NICHT DEM STRAHL AUSSETZEN.
ATTENZIONE - EMISSIONE DIUN RAGGIO LAZER INVISIBILE A SEGUITO
DELL' APERTURA DELLA COPERTURA O DELLA
RIMOZIONE DEL GRUPPO DI SVILUPPO.
EVITARE L'ESPOSIZIONE DIRETTA AL RAGGIO LASER.
PRECAUCIÓN - RADIACIÓN LÁSER INVISIBLE EN CASO DE A BRI R LA CUBIERTA
Y RETIRAR LA UNIDAD REVEL ADORA. EVITE LA EXPOSICIÓN
AL HAZ LÁSER.
VARO° - AVATTAESSA KEHITYSYKSIKON POISSAOLLESSA OLET ALTTIINA
NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE ÄLÄ KATSO SÄTEESEEN.
VAENING° - OSYNLIG LASERSTRÅLNING NAR DENNA DEL ÄR ÖPPNAD OCH
FRAMKALLAREN AR URTAGEN. BETRAKTA EJ STRÅLEN.
ADVARSEL° - USYNLIG LASER STRÅLING. NÅR DENNA ER ÅBENS FOR AT
EJERNE FREMKALDEREN. UNDGÅ AT BLIVE RAMT ÅF STRÅLEN.
ADVARSEL - USYNLIG LASERSTRÅLING NÅR DEKSELET ÅPNES OG
LASERENHETEN TAS UT. IKKE SE DIREKTE PASTRÅLEN.
ıT[rX} ÞjJo[¯˝s´ [U[ı“œ¸‡Œ˜¢
Jo[» J[g bW E •Ø A
[U[ı ‡ ‡Œ¨¢ / ˜› ‡¢B FB5 - 0281

Figure 1-602

D. Safety of Toner

Toner is non-toxic matter consisting of plastic, iron, and small amounts of dyes.

If your skin or clothes have come into contact with toner, remove it as much as possible with dry tissue, and wash off the remainder with water. (Do not use hot water, or toner will become jelly and fuse with cloth fibers). In addition, do not bring toner into contact with vinyl material to avoid chemical reaction (decomposition).

Caution:

Do not throw toner into fire. It may explode.

VII. IMAGE FORMATION

A. Outline

The machine uses an indirect photostatic reproduction method, and is constructed as shown in Figure 1-701.

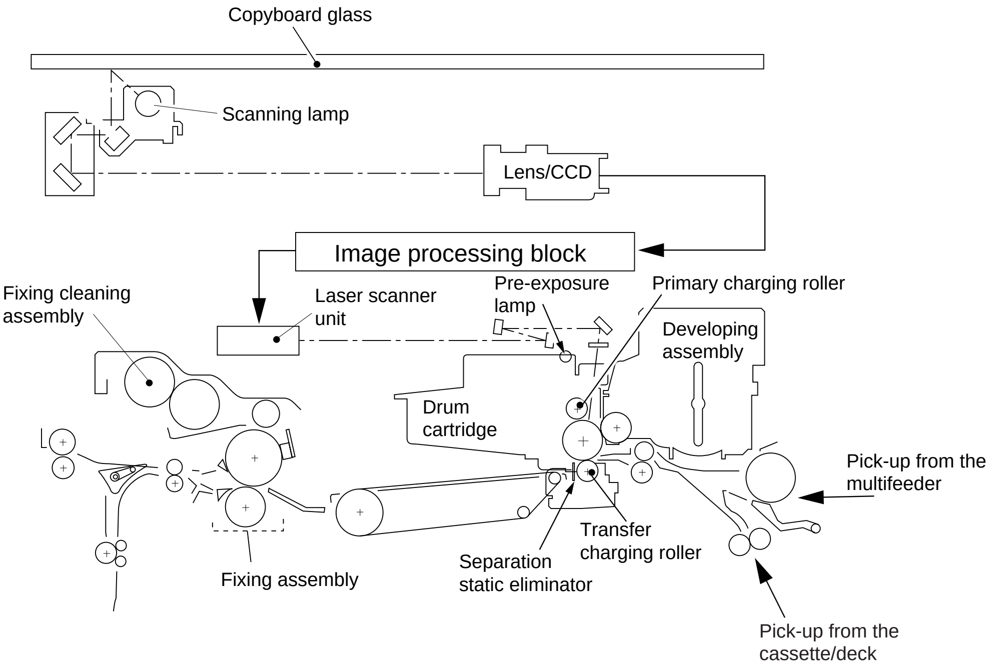

Copyboard glass
Scanning lamp
Lens/CCD
Image processing block
Fixing cleaning assembly
Laser scanner unit
Pre-exposure lamp
Primary charging roller
Developing assembly
Drum cartridge
Pick-up from the multifeeder
Transfer charging roller
Separation static eliminator
Fixing assembly
Pick-up from the cassette/deck

Figure 1-701

The machine's image formation block consists of the following eight steps:

Step 1 Pre-exposure
Step 2 Primary charging (AC + negative DC)
Step 3 Laser exposure
Step 4 Development (AC + negative DC bias)
Step 5 Transfer (positive DC)
Step 6 Separation (negative DC)
Step 7 Fixing
Step 8 Drum cleaning

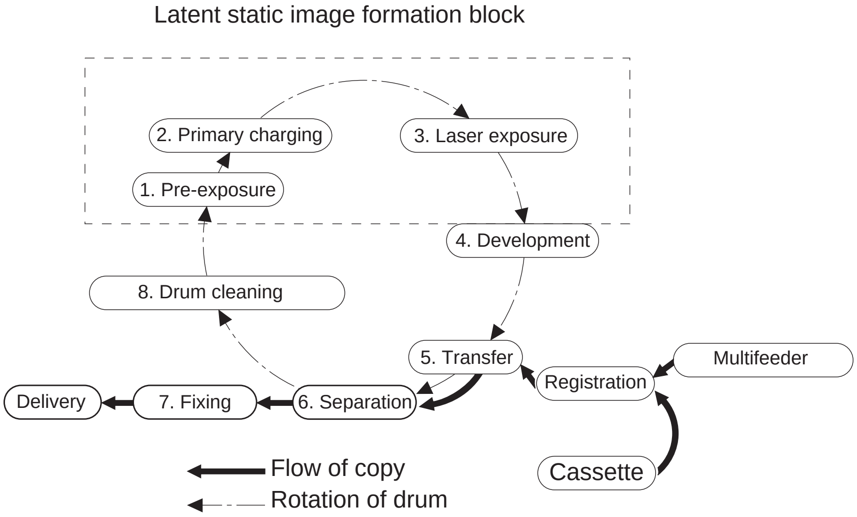

Latent static image formation block
2. Primary charging
3. Laser exposure
1. Pre-exposure
4. Development
8. Drum cleaning
5. Transfer
Multifeeder
Registration
Delivery
7. Fixing
6. Separation
Cassette
Flow of copy
Rotation of drum

Figure 1-702

CHAPTER 2

BASIC OPERATION PROVIDES

I. BASIC OPERATION 2-1
  A. Functional Construction 2-1
  B. Outline of the Electrical Circuitry 2-2
  C. Sequence of Operations 2-4
  D. Main Motor (M1) Control Circuit 2-8
  E. Inputs to and Outputs from the Major PCBs 2-10

I. BASIC OPERATION

A. Functional Construction

The machine may be divided into the following seven functional blocks:

1. Scanner Functions
   original exposure system, image processing system
2. Printer Functions
   laser exposure system, image formation system, pick-up/feeding system, communication system, control system

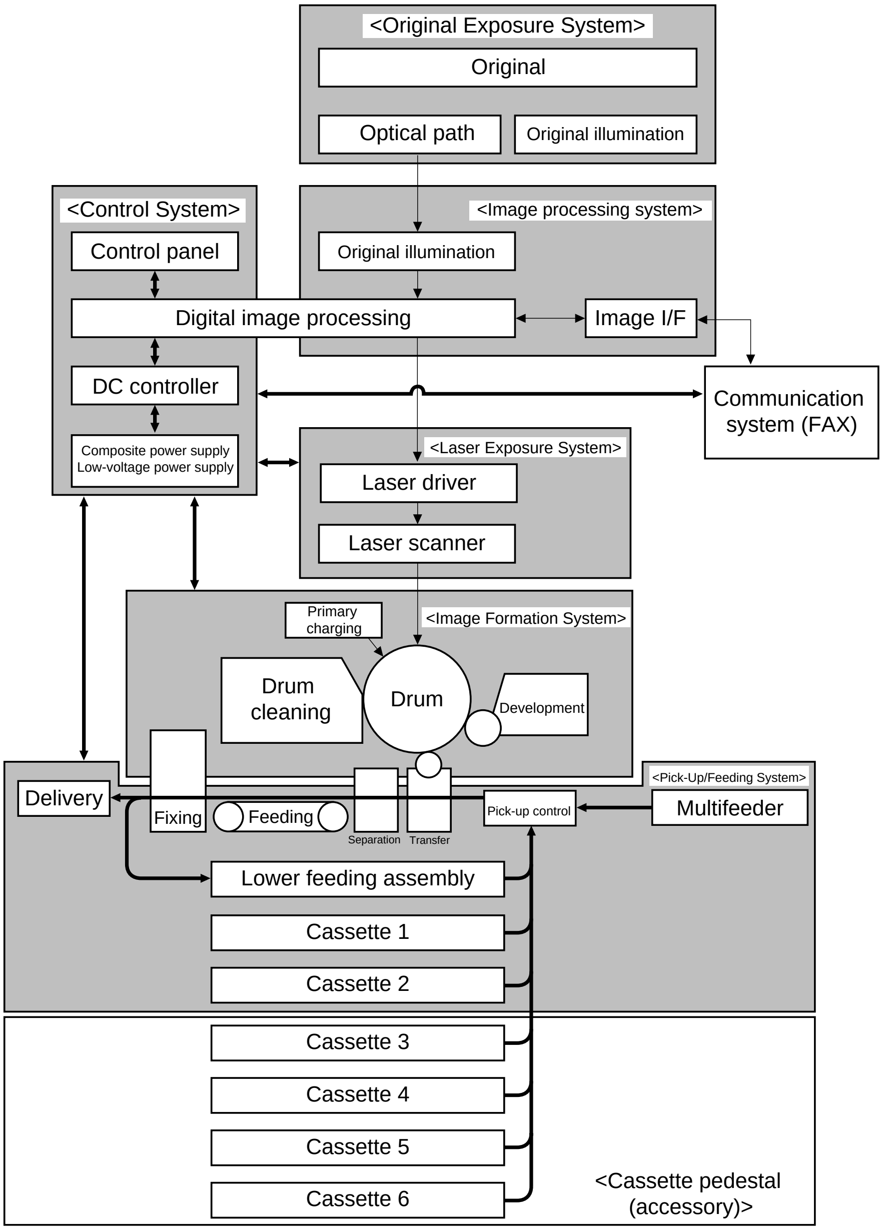

<Original Exposure System>
Original
Optical path
Original illumination
<Control System>
Control panel
<Image processing system>
Original illumination
Digital image processing
Image I/F
DC controller
Communication system (FAX)
Composite power supply
Low-voltage power supply
<Laser Exposure System>
Laser driver
Laser scanner
Primary charging
<Image Formation System>
Drum cleaning
Drum
Development
<Pick-Up/Feeding System>
Delivery
Fixing
Feeding
Separation
Transfer
Pick-up control
Multifeeder
Lower feeding assembly
Cassette 1
Cassette 2
Cassette 3
Cassette 4
Cassette 5
Cassette 6
<Cassette pedestal (accessory)>

Figure 2-101

B. Outline of the Electrical Circuitry

The major electrical mechanisms of the machine are controlled by the CPU on the image processor PCB and the composite power supply PCB. Table 2-101 shows the functions of the CPUs and those of the ICs associated with the CPU (ROM, RAM).

As many as four types of CPUs are used (for the control panel, image processor, DC controller PCB, composite power supply PCB); of them, the CPU for the DC controller PCB is mounted on the image processor PCB.

a. Image Processor PCB (main controller)

The image processor PCB possesses two types of CPUs and two types of flash ROMs and two RAMs. These CPUs are referred to as the "IP-CPU" (for the image processor circuit) and the "DC-CPU" (for the DC controller PCB) in terms of function.

Name	Description
IP-CPU (for image processor)	Controls the control panel; Controls memory management; Controls job management; Controls the feeder, DC controller PCB, copy data controller (accessory) communication; Controls the copy reader and printer; Controls the printer functions board; controls the fax print, read, and communication; Controls service and sales mode.
DC-CPU (for DC controller PCB)	Controls pick-up/feeding; Controls the sorter, Controls fixing; Controls high-voltage sequence; Controls image formation; Controls the main motor; Controls the laser scanner motor; Controls the scanner motor; Detects jams; Detects paper in the cassette; Controls service mode; Detects the size of originals; Controls IPC communication
IP, DIMM, Flash ROM, IP-CPU	Controls the programs; controls copying; Controls faxing; Controls control panel messages
DCC, DIMM, Flash ROM, DC-PC	Controls the copying sequence program
RAM-A* (for expansion, 32 MB; J723)	Retains service mode, user mode, and various parameters; Retains image memory
RAM-B* (for expansion, 32 MB; J723)	Retains service mode, user mode, and various parameters; Retains image memory

* If a single RAM, be sure to use the RAM-A slot.

Table 2-101

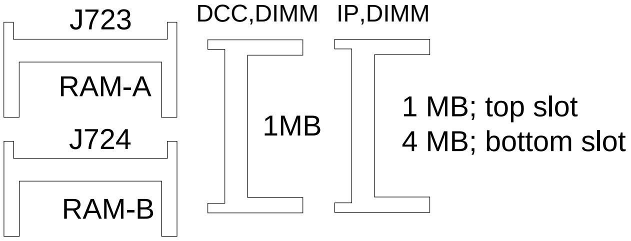


Figure 2-101-1

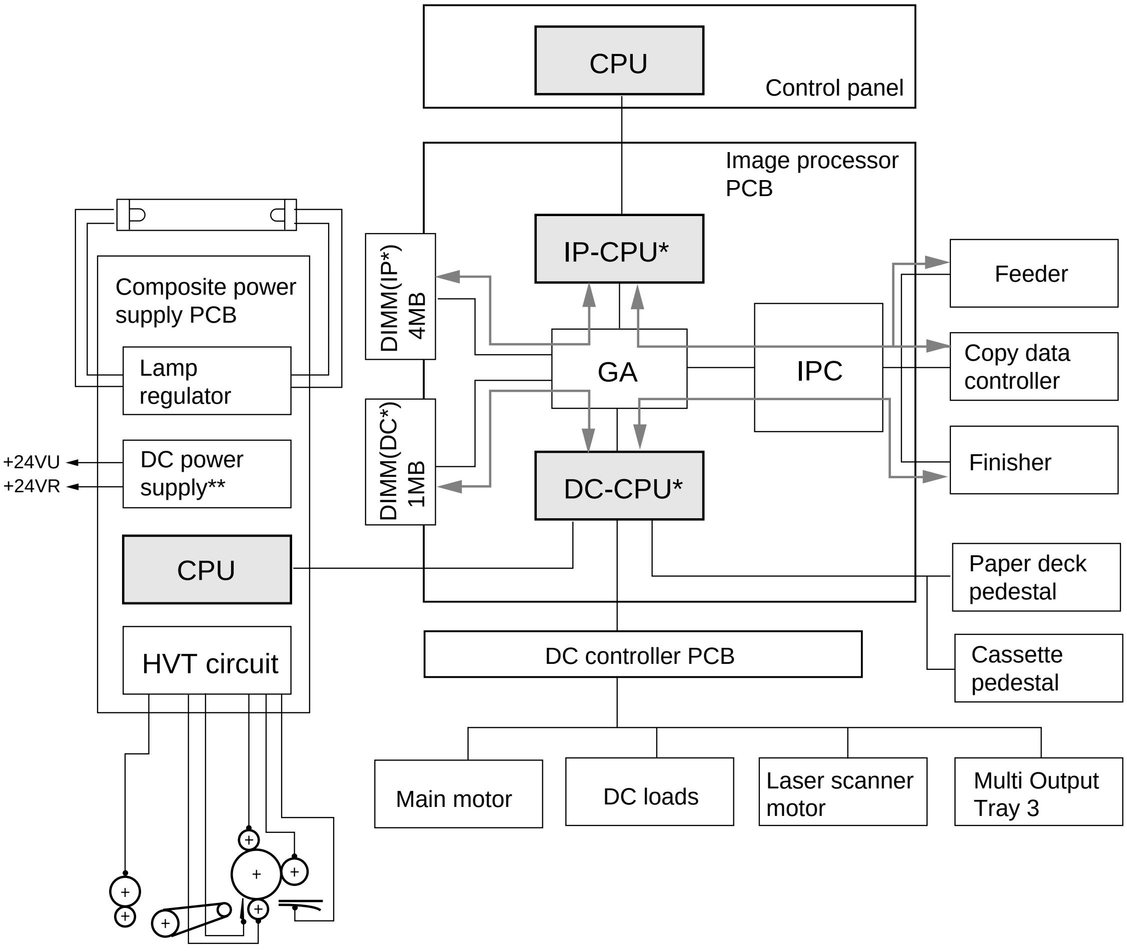
See VI-I in Chapter 13.

b. Control Panel

Name	Description
CPU	Monitors key inputs, Controls the buzzer sound, Controls LCD activation
ROM	

c. Composite Power Supply PCB

Name	Description
CPU	Controls high voltage; Detects the sate of the front door (open/closed; Supplies power to the fluorescent lamp; Controls the drum film thickness detection; Controls transfer; Controls power to the loads


CPU
Control panel
Image processor PCB
IP-CPU*
DIMM(IP*) 4MB
GA
IPC
DIMM(DC*) 1MB
DC-CPU*
Feeder
Copy data controller
Finisher
Paper deck pedestal
Cassette pedestal
Composite power supply PCB
Lamp regulator
+24VU
+24VR
DC power supply**
CPU
HVT circuit
DC controller PCB
Main motor
DC loads
Laser scanner motor
Multi Output Tray 3

*If IP, for the image processor; if DC, for the DC controller.
**A separate power supply is used for supplying low-voltage (other than 24 V).

Figure 2-102

C. Sequence of Operations

1. Outline

The machine's copying mode may be either of the following two; see the table for conditions and specifics of operation.

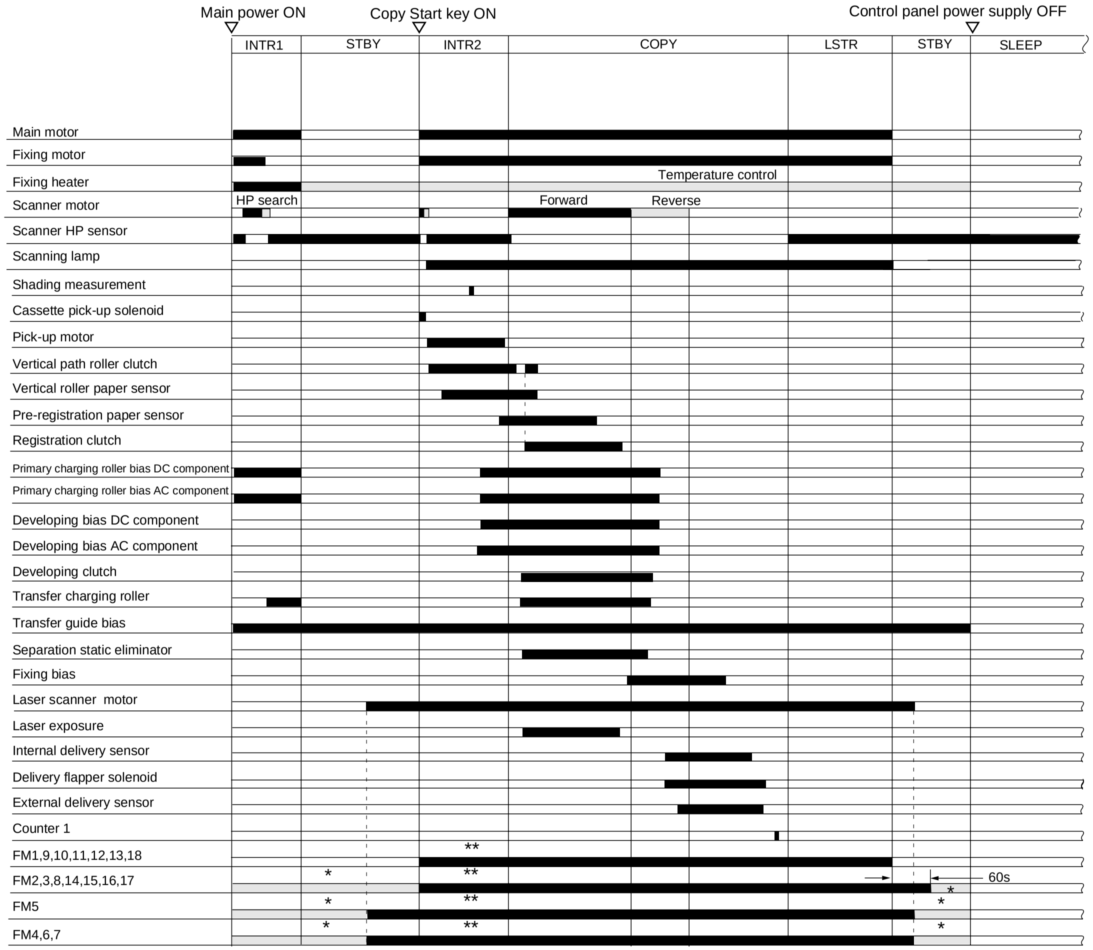
	Conditions	Operation
Direct copying	• The fixing temperature has reached the control temperature, and 1-on-1 copying is selected. • Interrupt copying is selected.	The scanning operation and the printing operation are linked on a 1-to-1 basis.
Memory copying	• A different job is being printed. • The printer is in wait. • Double-sided mode is selected. • Overlay mode is selected. • Image composition mode is selected. • Book binding mode is selected. • Transparency interleaf mode is selected. • Shift mode is selected. • Binding mode is selected. • Rotation sort/group sort mode is selected. • Staple mode is selected. • The image must be rotated. • Multiple copies must be made. • The ratio in sub scanning direction is less than 50%. • Size mix mode is selected. • Copyboard cover mode is selected for sort/group/staple mode.	The image memory that comes as standard or installed as an option is used; the image is scanned, and the resulting image data is stored in memory for printing. If 1-to-n, a single scan is made.

The standard memory is 32 MB; as much a 96 MB may be installed.

Table 2-102

2. Basic Sequence of Operations (direct Copying)

A4, plain paper, Direct, copyboard cover, 1 copy, topmost cassette, face-up delivery



*Half speed rotation. **Full-speed rotation.

Figure 2-103

3. Basic Sequence of Operations in Memory Copying

a. Starting the Operation

■ Conditions for Starting the Scanner

The Copy Start key on the control panel is enabled if the following conditions exist, ready for reading an original; however, printing does not occur until the conditions for printing are met:

- The main power switch and the control panel power switch are turned on, and all external covers are closed (24 V is on).

■ Conditions for Starting the Printer

The printer is ready if the page memory holds image data and the following condition exists:

- The fixing temperature is 170°C or more.

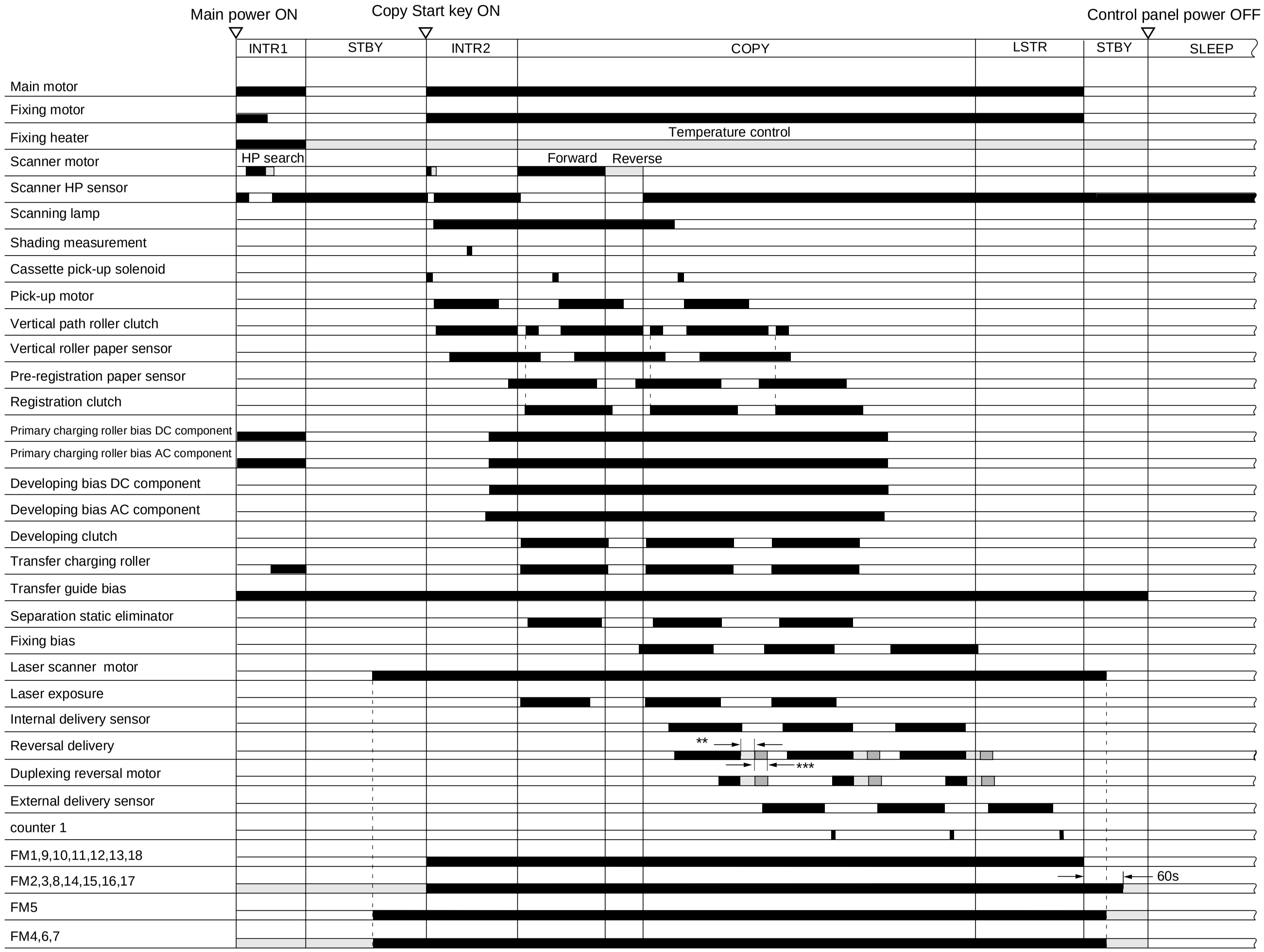
Note: The fixing temperature is the surface temperature of the upper fixing roller, which may be checked in service mode (DISPLAY>ANALOG>FIX-C).

b. Basic Sequence of Operations

Period		Purpose
INTR1 (initial rotation 1)	From when the main power switch is turned on or the front door is opened/closed to when standby or INTR2 starts.	Measure the resistance of the drum.
INTR2 (initial rotation 2)	From when the IP-CPU generates the print start signal to when the scanner starts to move forward.	• Stabilizes the sensitivity of the drum. • Executes shading correction.
SCAN (scan)	While an original is read.	Collects image data.
PRINT (print)	From when paper is picked up to when toner is transferred to paper (printing operation).	Prints images (vertical path sensor/internal delivery sensor signal reference)
LSTR (last rotation)	After the end of PRINT, until the paper moves past the delivery sensor.	Cleans the surface of the drum as post-processing (removes static charges).

Table 2-103

- pick-up from feeder, 1 original, plain paper, A4, 3 copies, Direct, cassette 1, memory copying



**Double speed rotation. ***Reversal double speed rotation.

Figure 2-104

D. Main Motor (M1) Control Circuit

1. Outline

Table 2-104 shows the functions of the main motor control circuit, and Figure 2-105 is a block diagram of the circuit.

Item	Description
Power supply	24 VDC from the composite power supply
Drive signal	MMD from the DC controller PCB
Operating/driving parts	Photosensitive drum, registration roller, developing assembly, vertical path roller, feeding assembly, delivery roller, multifeeder pick-up roller
Control	• Turns on/off the main motor. • Controls the main motor to a specific speed.

Table 2-104

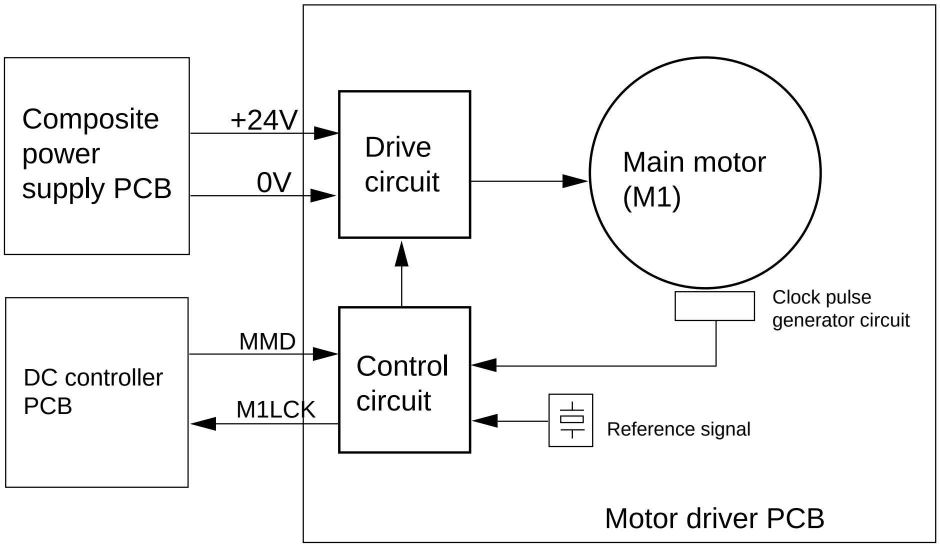

Composite power supply PCB
+24V
0V
Drive circuit
Main motor (M1)
Clock pulse generator circuit
DC controller PCB
MMD
M1LCK
Control circuit
Reference signal
Motor driver PCB

figure 2-105

a. Turning Off and On the Main Motor

When the main motor drive signal goes '1', the control circuit on the main motor driver PCB turns on to generate drive current, thereby starting the main motor.

When the drive signal goes '0', on the other hand, the output of the control signal stops, and the absence of drive current stops the main motor.

b. Controlling the Main Motor to a Specific Speed

The machine's main motor is subjected to constant speed control, ensuring that it rotates at a specific speed.

The driver PCB controls the motor in such a way that the frequency of the clock pulses occurring as a result of the rotation of the motor and that of the reference pulse signal from the main motor PCB will match. While in control, the motor sends a signal (M1LCK=1) to the DC controller PCB to indicate that it is rotating at a specific speed.

c. Detecting Errors (E010)

If a fluctuation occurs in the rotation of the main motor for some reason, the signal used to indicate rotation at a specific speed (M1LCK) goes '0'; the condition will be identified as a main motor error and, as a result, all operations will be stopped and 'E010' will be indicated on the control panel.

E. Inputs to and Outputs from the Major PCBs

1. Image Processor Circuit

- Inputs to and Outputs from the Image Processor Circuit

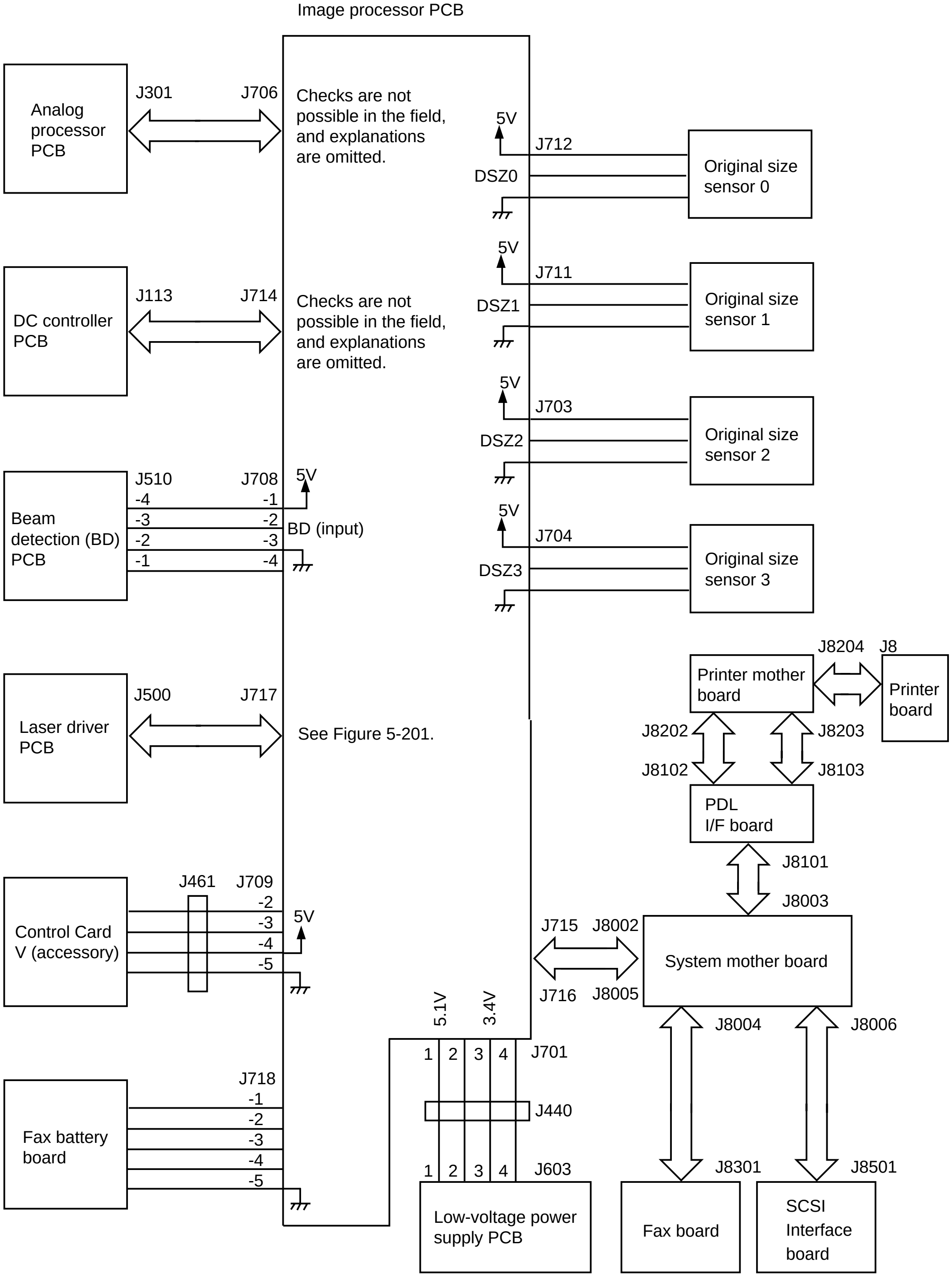


Image processor PCB
Analog processor PCB
J301
J706
Checks are not possible in the field, and explanations are omitted.
5V
J712
DSZ0
Original size sensor 0
5V
J711
DSZ1
Original size sensor 1
DC controller PCB
J113
J714
Checks are not possible in the field, and explanations are omitted.
5V
J703
DSZ2
Original size sensor 2
Beam detection (BD) PCB
J510
-4
-3
-2
-1
J708
-1
-2
-3
-4
5V
BD (input)
5V
J704
DSZ3
Original size sensor 3
Printer mother board
J8204
J8
Printer board
Laser driver PCB
J500
J717
See Figure 5-201.
J8202
J8102
J8203
J8103
PDL I/F board
J8101
J8003
Control Card V (accessory)
J461
J709
-2
-3
-4
-5
5V
J715
J8002
System mother board
J716
J8005
5.1V
3.4V
1 2 3 4
J701
J8004
J8006
Fax battery board
J718
-1
-2
-3
-4
-5
J440
1 2 3 4
J603
J8301
J8501
Low-voltage power supply PCB
Fax board
SCSI Interface board

Figure 2-106

- Inputs to and Outputs from the Image Processor Circuit (2/2)

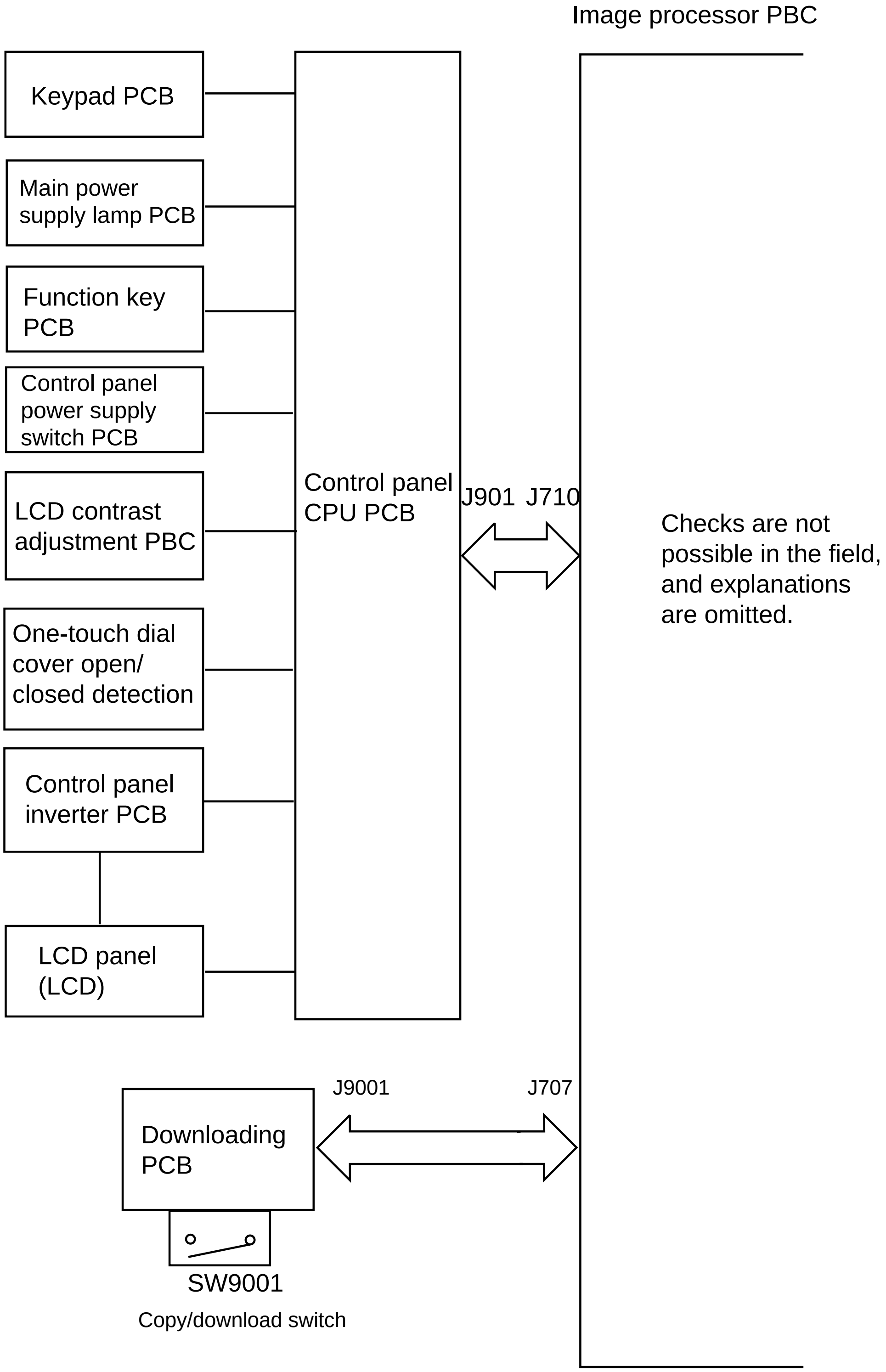


Image processor PBC
Keypad PCB
Main power supply lamp PCB
Function key PCB
Control panel power supply switch PCB
LCD contrast adjustment PBC
One-touch dial cover open/ closed detection
Control panel inverter PCB
LCD panel (LCD)
Control panel CPU PCB
J901
J710
Checks are not possible in the field, and explanations are omitted.
Downloading PCB
J9001
J707
SW9001
Copy/download switch

Figure 2-107

2. Inputs to the DC Controller

- Inputs to the DC Controller PCB (1/4)

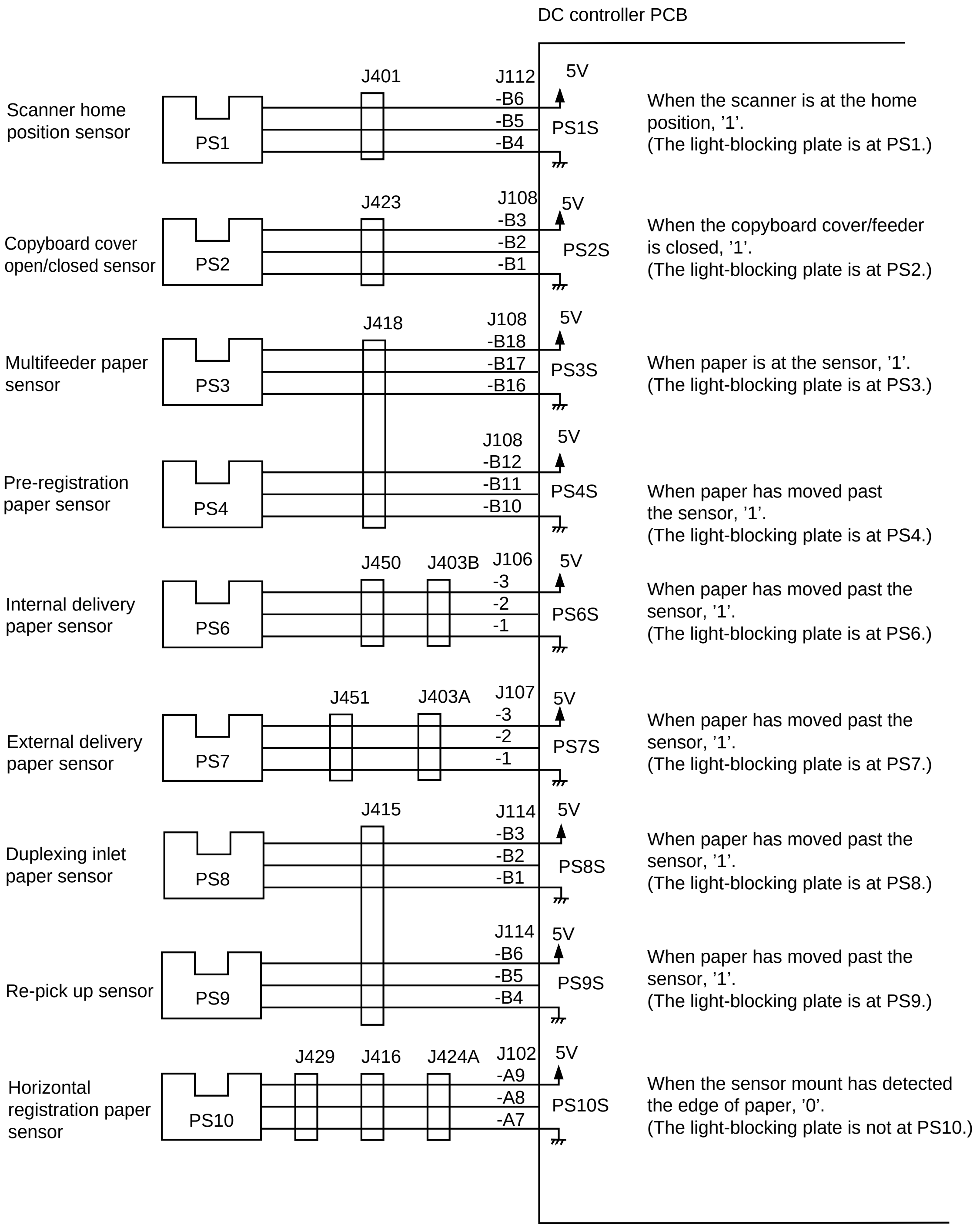

DC controller PCB
Scanner home position sensor
PS1
J401
J112
-B6
-B5
-B4
5V
PS1S
When the scanner is at the home position, '1'.
(The light-blocking plate is at PS1.)
Copyboard cover open/closed sensor
PS2
J423
J108
-B3
-B2
-B1
5V
PS2S
When the copyboard cover/feeder is closed, '1'.
(The light-blocking plate is at PS2.)
Multifeeder paper sensor
PS3
J418
J108
-B18
-B17
-B16
5V
PS3S
When paper is at the sensor, '1'.
(The light-blocking plate is at PS3.)
Pre-registration paper sensor
PS4
J108
-B12
-B11
-B10
5V
PS4S
When paper has moved past the sensor, '1'.
(The light-blocking plate is at PS4.)
Internal delivery paper sensor
PS6
J450
J403B
J106
-3
-2
-1
5V
PS6S
When paper has moved past the sensor, '1'.
(The light-blocking plate is at PS6.)
External delivery paper sensor
PS7
J451
J403A
J107
-3
-2
-1
5V
PS7S
When paper has moved past the sensor, '1'.
(The light-blocking plate is at PS7.)
Duplexing inlet paper sensor
PS8
J415
J114
-B3
-B2
-B1
5V
PS8S
When paper has moved past the sensor, '1'.
(The light-blocking plate is at PS8.)
Re-pick up sensor
PS9
J114
-B6
-B5
-B4
5V
PS9S
When paper has moved past the sensor, '1'.
(The light-blocking plate is at PS9.)
Horizontal registration paper sensor
PS10
J429
J416
J424A
J102
-A9
-A8
-A7
5V
PS10S
When the sensor mount has detected the edge of paper, '0'.
(The light-blocking plate is not at PS10.)

Figure 2-108

- Inputs to the DC Controller PCB (2/4)

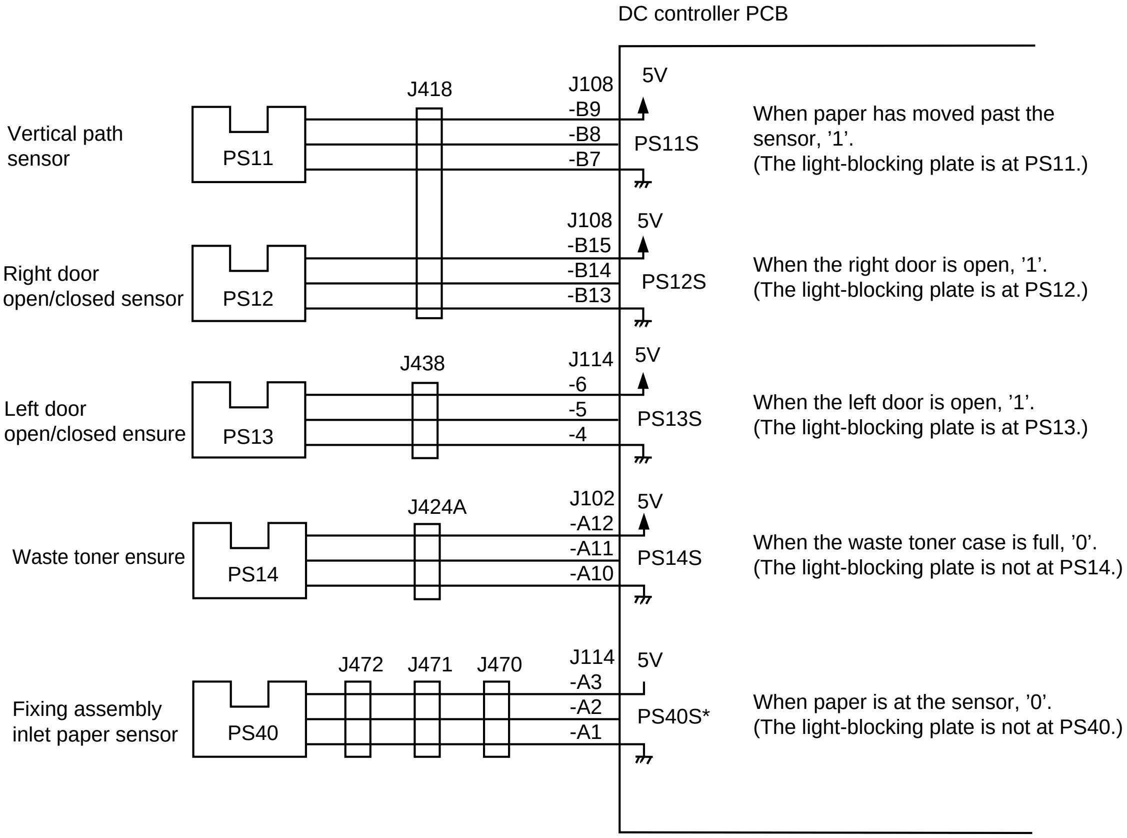
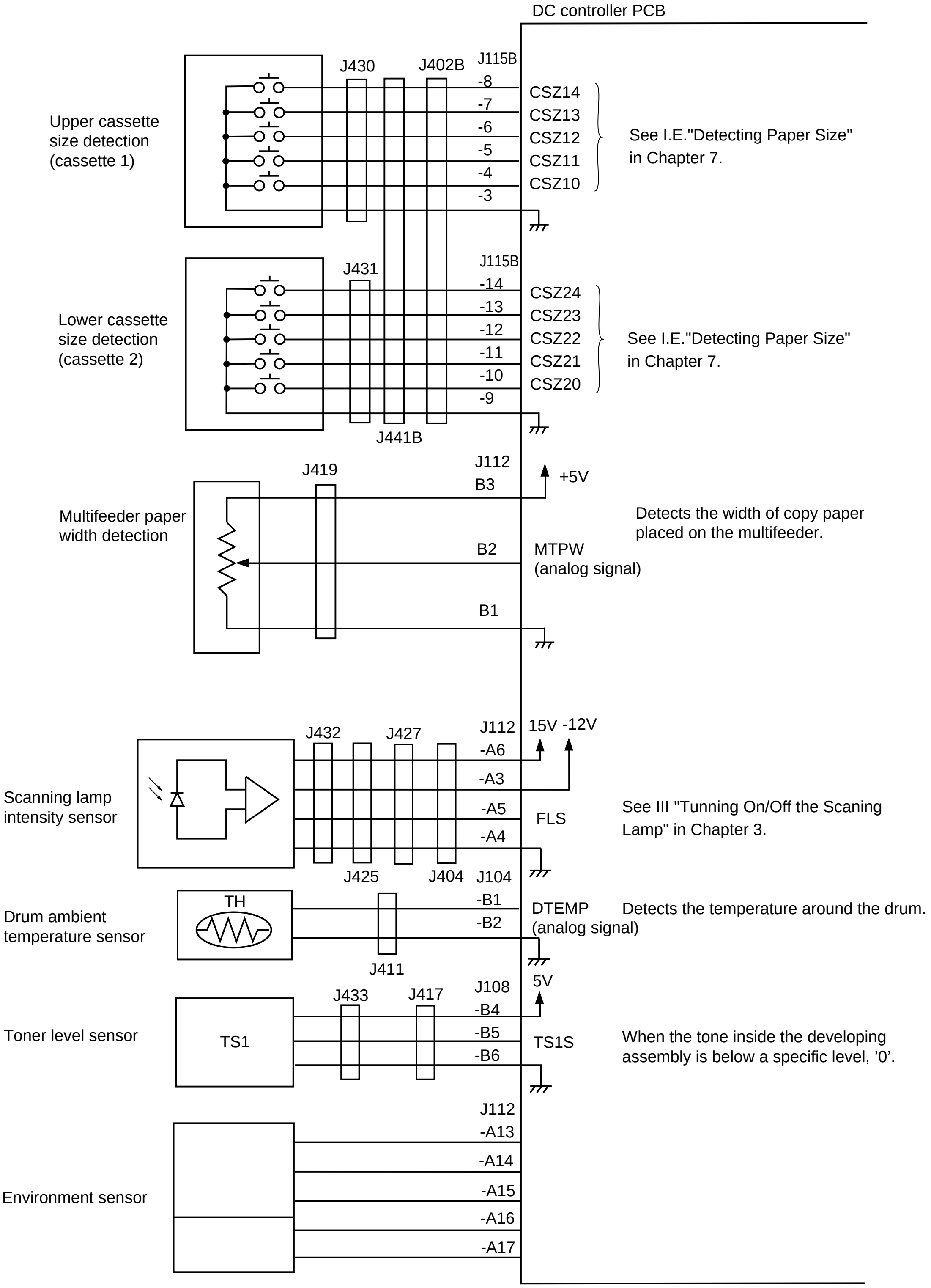

DC controller PCB
J418
J108
-B9
-B8
-B7
5V
PS11S
Vertical path sensor
PS11
When paper has moved past the sensor, '1'.
(The light-blocking plate is at PS11.)
J108
-B15
-B14
-B13
5V
PS12S
Right door open/closed sensor
PS12
When the right door is open, '1'.
(The light-blocking plate is at PS12.)
J438
J114
-6
-5
-4
5V
PS13S
Left door open/closed ensure
PS13
When the left door is open, '1'.
(The light-blocking plate is at PS13.)
J424A
J102
-A12
-A11
-A10
5V
PS14S
Waste toner ensure
PS14
When the waste toner case is full, '0'.
(The light-blocking plate is not at PS14.)
J472
J471
J470
J114
-A3
-A2
-A1
5V
PS40S*
Fixing assembly inlet paper sensor
PS40
When paper is at the sensor, '0'.
(The light-blocking plate is not at PS40.)

Figure 2-109

- Inputs to the DC Controller PBC (3/4)


DC controller PCB
Upper cassette size detection (cassette 1)
J430
J402B
J115B
-8
-7
-6
-5
-4
-3
CSZ14
CSZ13
CSZ12
CSZ11
CSZ10
Lower cassette size detection (cassette 2)
J431
J115B
-14
-13
-12
-11
-10
-9
CSZ24
CSZ23
CSZ22
CSZ21
CSZ20
J441B
Multifeeder paper width detection
J419
J112
B3
+5V
B2
MTPW
(analog signal)
B1
Scanning lamp intensity sensor
J432
J427
J112
-A6
15V
-12V
-A3
-A5
FLS
-A4
J425
J404
J104
Drum ambient temperature sensor
TH
-B1
-B2
DTEMP
(analog signal)
J411
Toner level sensor
J433
J417
J108
5V
-B4
-B5
-B6
TS1
TS1S
Environment sensor
J112
-A13
-A14
-A15
-A16
-A17

See I.E."Detecting Paper Size" in Chapter 7.

See I.E."Detecting Paper Size" in Chapter 7.

Detects the width of copy paper placed on the multifeeder.

See III "Tunning On/Off the Scaning Lamp" in Chapter 3.

Detects the temperature around the drum.

When the tone inside the developing assembly is below a specific level, '0'.

Figure 2-110

- Inputs to the DC Controller PCB (4/4)

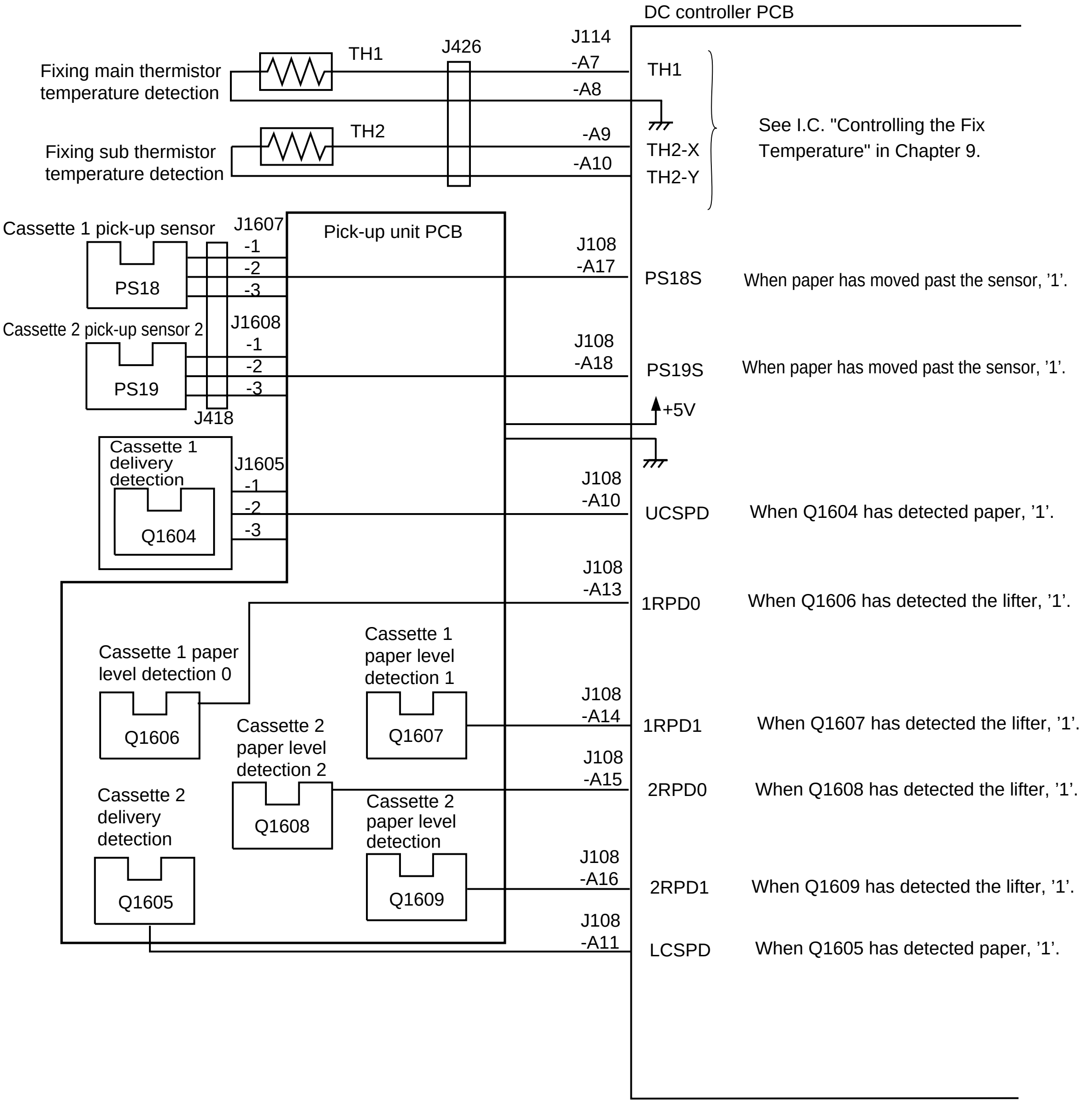

DC controller PCB
Fixing main thermistor temperature detection
TH1
J426
J114
-A7
-A8
TH1
Fixing sub thermistor temperature detection
TH2
-A9
-A10
TH2-X
TH2-Y
See I.C. "Controlling the Fix Temperature" in Chapter 9.
Cassette 1 pick-up sensor
J1607
-1
-2
-3
PS18
Pick-up unit PCB
J108
-A17
PS18S
When paper has moved past the sensor, '1'.
Cassette 2 pick-up sensor 2
J1608
-1
-2
-3
PS19
J418
J108
-A18
PS19S
When paper has moved past the sensor, '1'.
+5V
Cassette 1 delivery detection
J1605
-1
-2
-3
Q1604
J108
-A10
UCSPD
When Q1604 has detected paper, '1'.
J108
-A13
1RPD0
When Q1606 has detected the lifter, '1'.
Cassette 1 paper level detection 0
Q1606
Cassette 1 paper level detection 1
Q1607
J108
-A14
1RPD1
When Q1607 has detected the lifter, '1'.
Cassette 2 paper level detection 2
Q1608
J108
-A15
2RPD0
When Q1608 has detected the lifter, '1'.
Cassette 2 delivery detection
Q1605
Cassette 2 paper level detection
Q1609
J108
-A16
2RPD1
When Q1609 has detected the lifter, '1'.
J108
-A11
LCSPD
When Q1605 has detected paper, '1'.

Figure 2-111

3. Outputs from the DC Controller PCB

- Outputs from the DC Controller PCB (1/5)

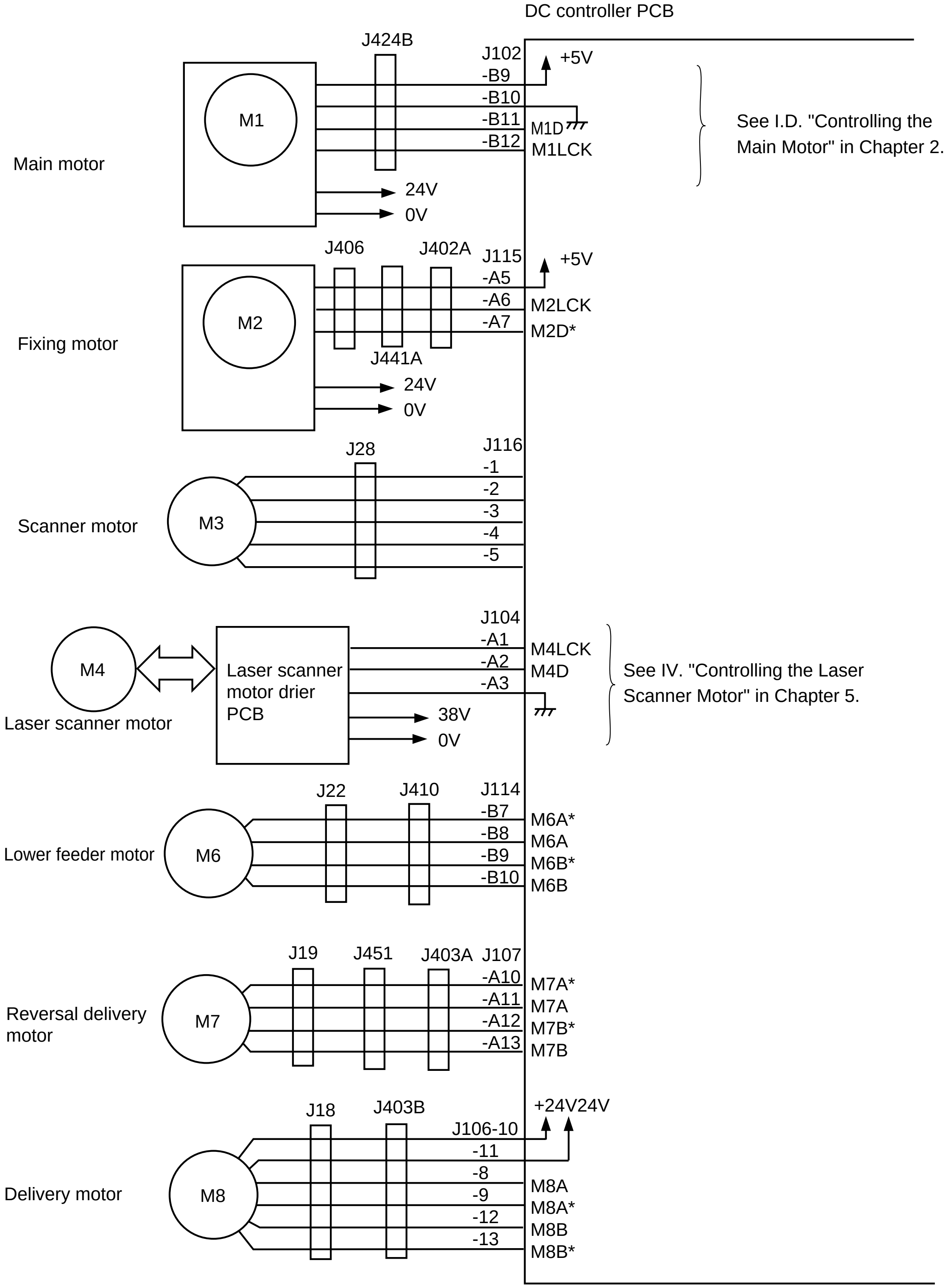

DC controller PCB
J424B
J102
-B9
-B10
-B11
-B12
+5V
M1D*
M1LCK
M1
Main motor
24V
0V
See I.D. "Controlling the Main Motor" in Chapter 2.
J406
J402A
J115
-A5
-A6
-A7
+5V
M2LCK
M2D*
M2
Fixing motor
J441A
24V
0V
J28
J116
-1
-2
-3
-4
-5
M3
Scanner motor
J104
-A1
-A2
-A3
M4LCK
M4D
M4
Laser scanner motor drier PCB
Laser scanner motor
38V
0V
See IV. "Controlling the Laser Scanner Motor" in Chapter 5.
J22
J410
J114
-B7
-B8
-B9
-B10
M6A*
M6A
M6B*
M6B
Lower feeder motor
M6
J19
J451
J403A
J107
-A10
-A11
-A12
-A13
M7A*
M7A
M7B*
M7B
Reversal delivery motor
M7
J18
J403B
+24V24V
J106-10
-11
-8
-9
-12
-13
M8A
M8A*
M8B
M8B*
Delivery motor
M8

Figure 2-112

- Outputs from the DC Controller PCB (2/5)

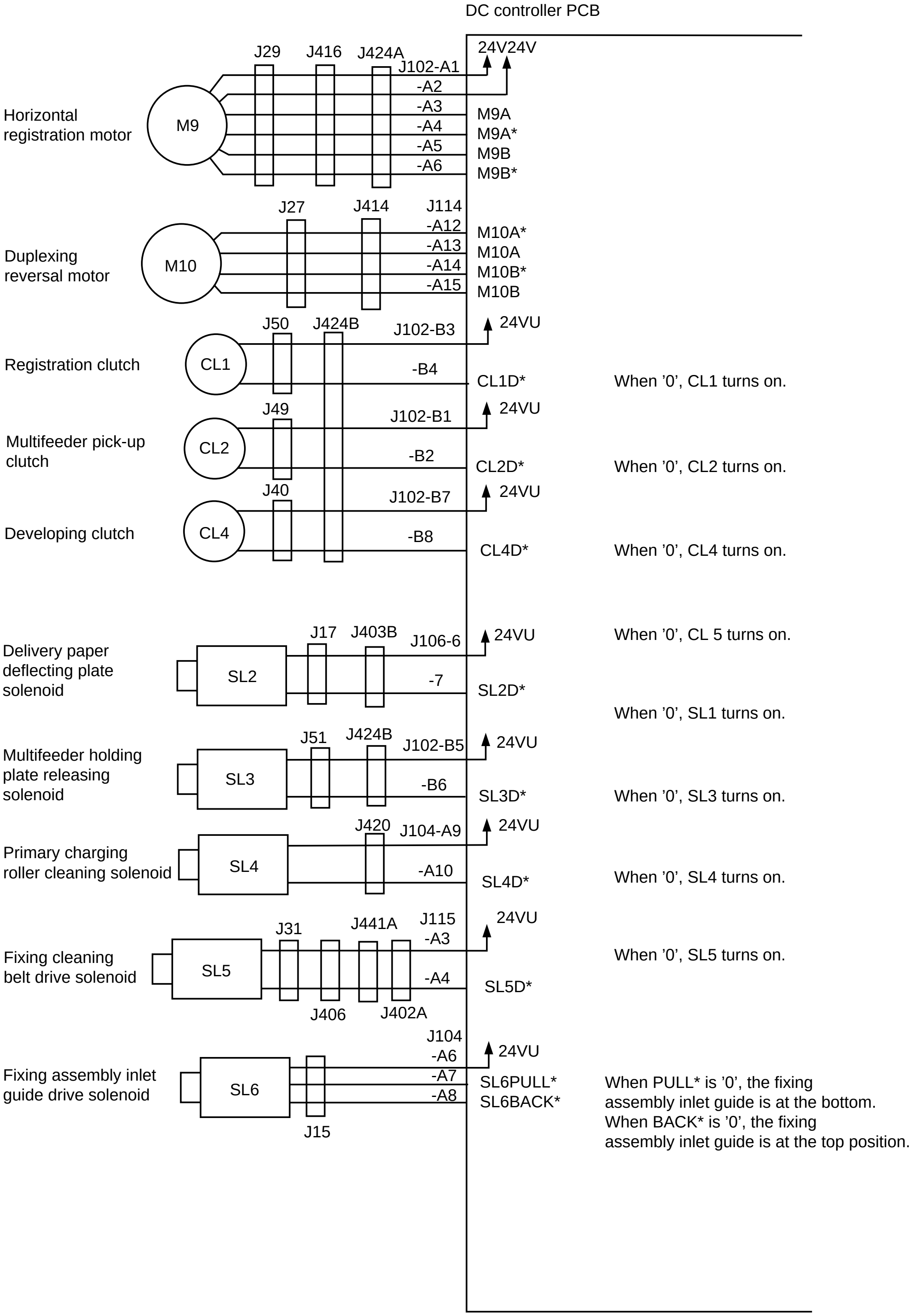
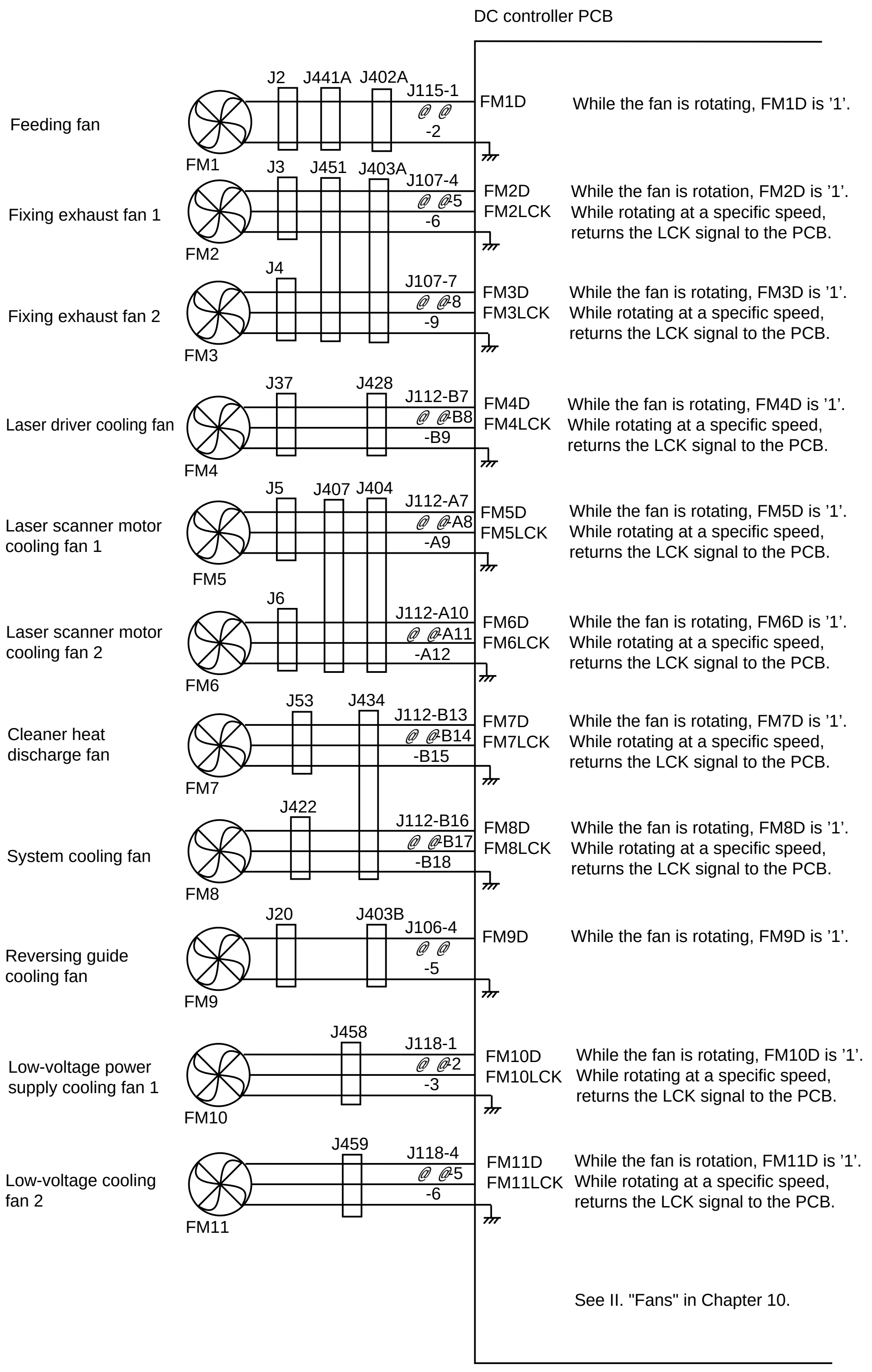

DC controller PCB
J29
J416
J424A
J102-A1
-A2
-A3
-A4
-A5
-A6
24V24V
M9A
M9A*
M9B
M9B*
Horizontal registration motor
M9
J27
J414
J114
-A12
-A13
-A14
-A15
M10A*
M10A
M10B*
M10B
Duplexing reversal motor
M10
J50
J424B
J102-B3
24VU
-B4
CL1D*
When '0', CL1 turns on.
Registration clutch
CL1
J49
J102-B1
24VU
-B2
CL2D*
When '0', CL2 turns on.
Multifeeder pick-up clutch
CL2
J40
J102-B7
24VU
-B8
CL4D*
When '0', CL4 turns on.
Developing clutch
CL4
J17
J403B
J106-6
24VU
When '0', CL 5 turns on.
-7
SL2D*
Delivery paper deflecting plate solenoid
SL2
When '0', SL1 turns on.
J51
J424B
J102-B5
24VU
-B6
SL3D*
When '0', SL3 turns on.
Multifeeder holding plate releasing solenoid
SL3
J420
J104-A9
24VU
-A10
SL4D*
When '0', SL4 turns on.
Primary charging roller cleaning solenoid
SL4
J31
J441A
J115
-A3
24VU
-A4
SL5D*
When '0', SL5 turns on.
J406
J402A
Fixing cleaning belt drive solenoid
SL5
J104
-A6
-A7
-A8
24VU
SL6PULL*
SL6BACK*
When PULL* is '0', the fixing assembly inlet guide is at the bottom.
When BACK* is '0', the fixing assembly inlet guide is at the top position.
Fixing assembly inlet guide drive solenoid
SL6
J15

Figure 2-113

- Outputs from the DC Controller PCB (3/5)


DC controller PCB
Feeding fan
FM1
J2
J441A
J402A
J115-1
-2
FM1D
Fixing exhaust fan 1
FM2
J3
J451
J403A
J107-4
5
-6
FM2D
FM2LCK
Fixing exhaust fan 2
FM3
J4
J107-7
8
-9
FM3D
FM3LCK
Laser driver cooling fan
FM4
J37
J428
J112-B7
B8
-B9
FM4D
FM4LCK
Laser scanner motor cooling fan 1
FM5
J5
J407
J404
J112-A7
A8
-A9
FM5D
FM5LCK
Laser scanner motor cooling fan 2
FM6
J6
J112-A10
A11
-A12
FM6D
FM6LCK
Cleaner heat discharge fan
FM7
J53
J434
J112-B13
B14
-B15
FM7D
FM7LCK
System cooling fan
FM8
J422
J112-B16
B17
-B18
FM8D
FM8LCK
Reversing guide cooling fan
FM9
J20
J403B
J106-4
-5
FM9D
Low-voltage power supply cooling fan 1
FM10
J458
J118-1
2
-3
FM10D
FM10LCK
Low-voltage cooling fan 2
FM11
J459
J118-4
5
-6
FM11D
FM11LCK

While the fan is rotating, FM1D is '1'.

While the fan is rotation, FM2D is '1'.
While rotating at a specific speed, returns the LCK signal to the PCB.

While the fan is rotating, FM3D is '1'.
While rotating at a specific speed, returns the LCK signal to the PCB.

While the fan is rotating, FM4D is '1'.
While rotating at a specific speed, returns the LCK signal to the PCB.

While the fan is rotating, FM5D is '1'.
While rotating at a specific speed, returns the LCK signal to the PCB.

While the fan is rotating, FM6D is '1'.
While rotating at a specific speed, returns the LCK signal to the PCB.

While the fan is rotating, FM7D is '1'.
While rotating at a specific speed, returns the LCK signal to the PCB.

While the fan is rotating, FM8D is '1'.
While rotating at a specific speed, returns the LCK signal to the PCB.

While the fan is rotating, FM9D is '1'.

While the fan is rotating, FM10D is '1'.
While rotating at a specific speed, returns the LCK signal to the PCB.

While the fan is rotation, FM11D is '1'.
While rotating at a specific speed, returns the LCK signal to the PCB.

See II. "Fans" in Chapter 10.

Figure 2-114

- Outputs from the DC Controller (4/5)

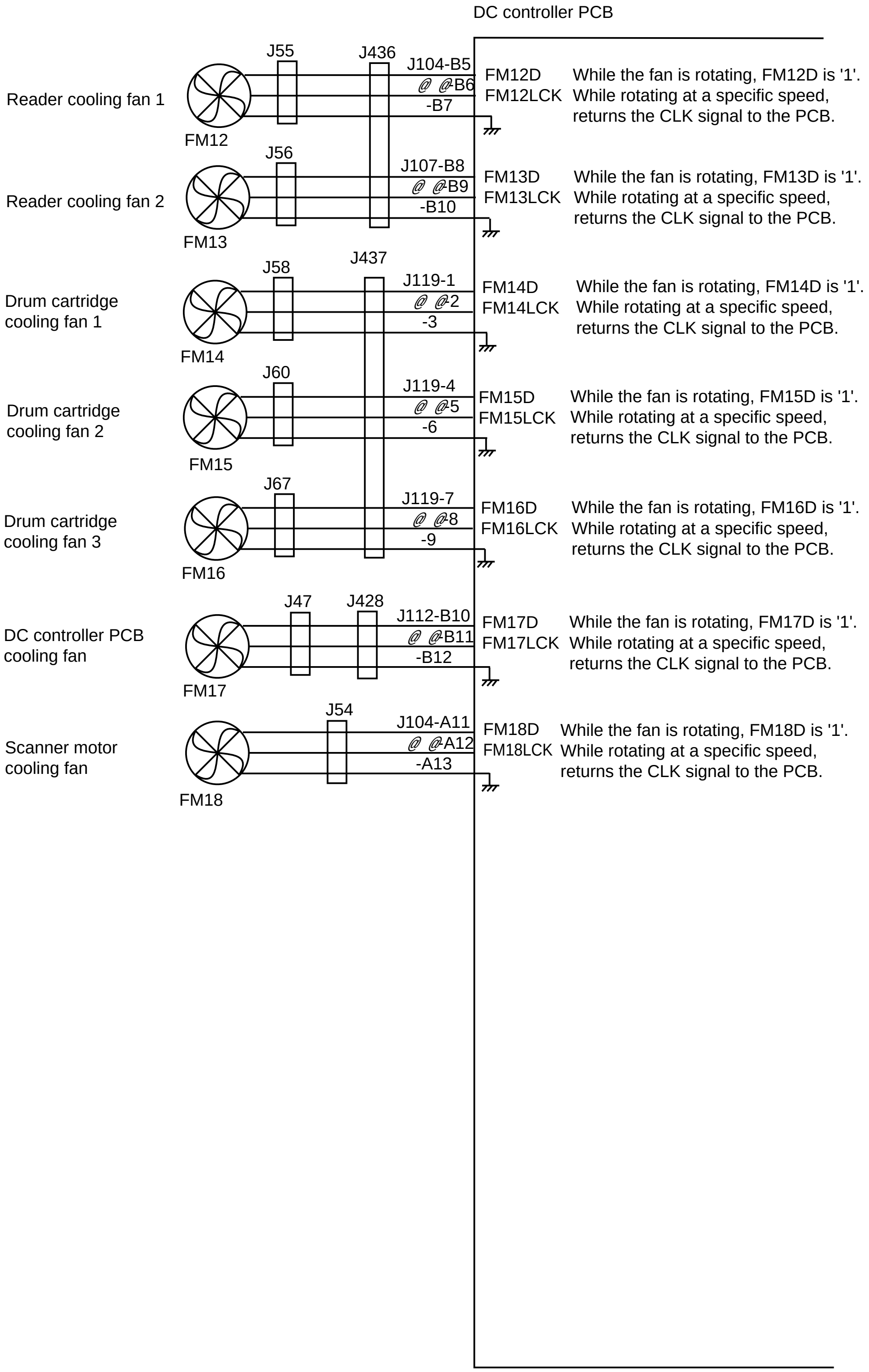

DC controller PCB
J55
J436
J104-B5
-B6
-B7
FM12D
FM12LCK
While the fan is rotating, FM12D is '1'.
While rotating at a specific speed, returns the CLK signal to the PCB.
Reader cooling fan 1
FM12
J56
J107-B8
-B9
-B10
FM13D
FM13LCK
While the fan is rotating, FM13D is '1'.
While rotating at a specific speed, returns the CLK signal to the PCB.
Reader cooling fan 2
FM13
J58
J437
J119-1
-2
-3
FM14D
FM14LCK
While the fan is rotating, FM14D is '1'.
While rotating at a specific speed, returns the CLK signal to the PCB.
Drum cartridge cooling fan 1
FM14
J60
J119-4
-5
-6
FM15D
FM15LCK
While the fan is rotating, FM15D is '1'.
While rotating at a specific speed, returns the CLK signal to the PCB.
Drum cartridge cooling fan 2
FM15
J67
J119-7
-8
-9
FM16D
FM16LCK
While the fan is rotating, FM16D is '1'.
While rotating at a specific speed, returns the CLK signal to the PCB.
Drum cartridge cooling fan 3
FM16
J47
J428
J112-B10
-B11
-B12
FM17D
FM17LCK
While the fan is rotating, FM17D is '1'.
While rotating at a specific speed, returns the CLK signal to the PCB.
DC controller PCB cooling fan
FM17
J54
J104-A11
-A12
-A13
FM18D
FM18LCK
While the fan is rotating, FM18D is '1'.
While rotating at a specific speed, returns the CLK signal to the PCB.
Scanner motor cooling fan
FM18

Figure 2-115

- DC Controller PCB (5/5)

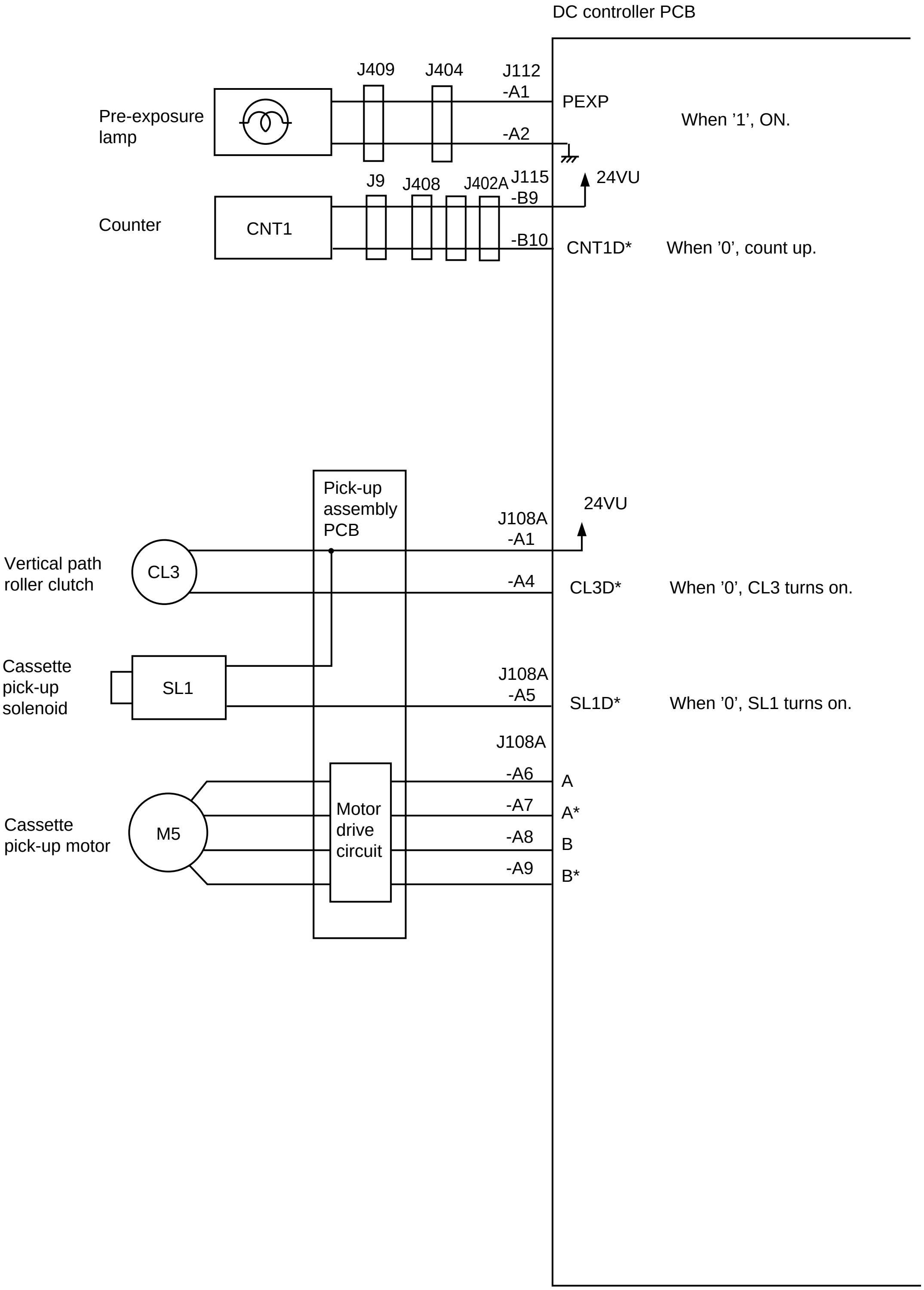

DC controller PCB
J409
J404
J112
-A1
PEXP
When '1', ON.
Pre-exposure lamp
-A2
J9
J408
J402A
J115
-B9
24VU
Counter
CNT1
-B10
CNT1D*
When '0', count up.
Pick-up assembly PCB
24VU
J108A
-A1
Vertical path roller clutch
CL3
-A4
CL3D*
When '0', CL3 turns on.
Cassette pick-up solenoid
SL1
J108A
-A5
SL1D*
When '0', SL1 turns on.
J108A
-A6
A
-A7
A*
-A8
B
-A9
B*
Cassette pick-up motor
M5
Motor drive circuit

Figure 2-116

CHAPTER 3

EXPOSURE SYSTEM

I. OUTLINE OF OPERATIONS 3-1
  A. Outline 3-1
  B. Sequence of Operations (original exposure system) 3-2
II. SCANNER DRIVE SYSTEM 3-3
III. CONTROLLING THE SCANNING LAMP 3-4
  A. Outline 3-4
  B. Controlling the Pre-Heating Mechanism 3-5
  C. Turning On and Off the Scanning Lamp 3-5
  D. Controlling the Intensity 3-5
  E. Detecting Errors 3-6
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  B. Identifying the Size by the Paper Sensors (1) 3-7
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I. OUTLINE OF OPERATIONS

A. Outline

The machine's original exposure system consists of the following: the scanning lamp, exposes originals; the mirror mount used kd to expose omirror mount, which forms an optical path between an original and the CCD; and the scanner motor, which drives the scanner.

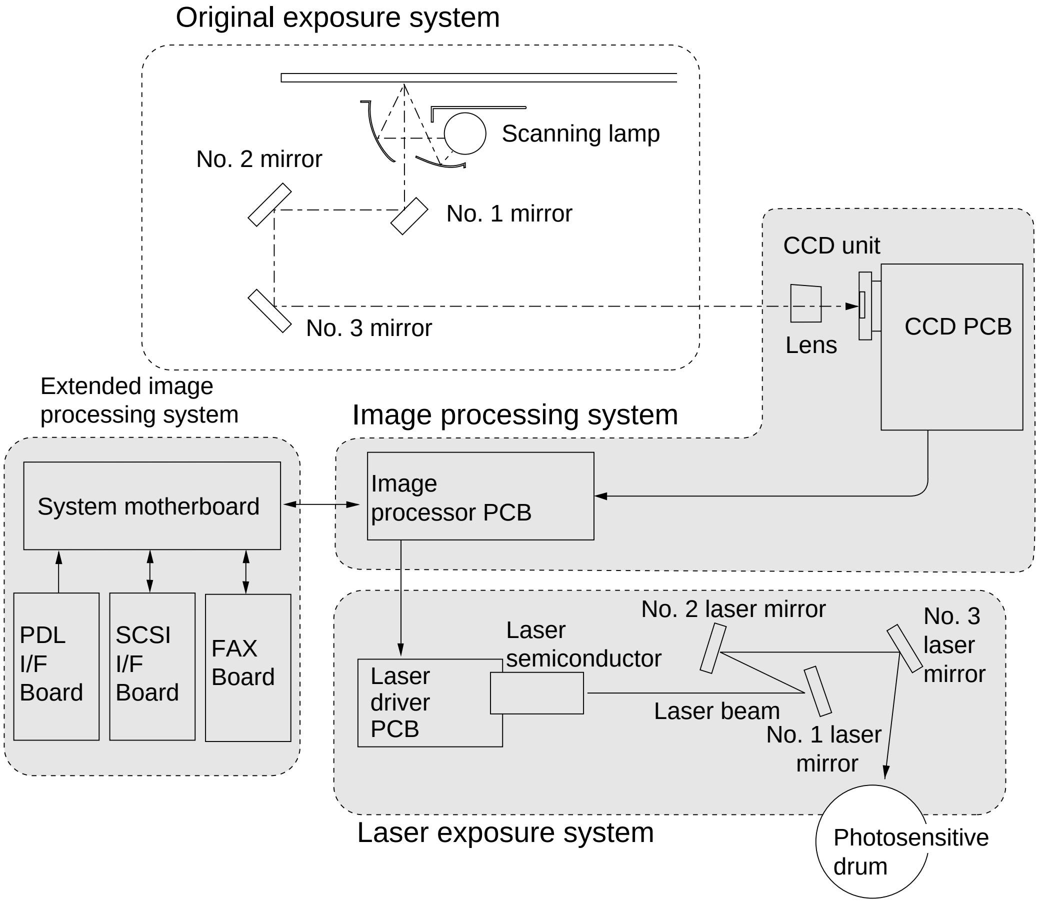

Original exposure system
Scanning lamp
No. 2 mirror
No. 1 mirror
No. 3 mirror
CCD unit
Lens
CCD PCB
Extended image processing system
Image processing system
System motherboard
Image processor PCB
PDL I/F Board
SCSI I/F Board
FAX Board
Laser semiconductor
No. 2 laser mirror
No. 3 laser mirror
Laser driver PCB
Laser beam
No. 1 laser mirror
Laser exposure system
Photosensitive drum

Figure 3-100

B. Sequence of Operations (original exposure system)

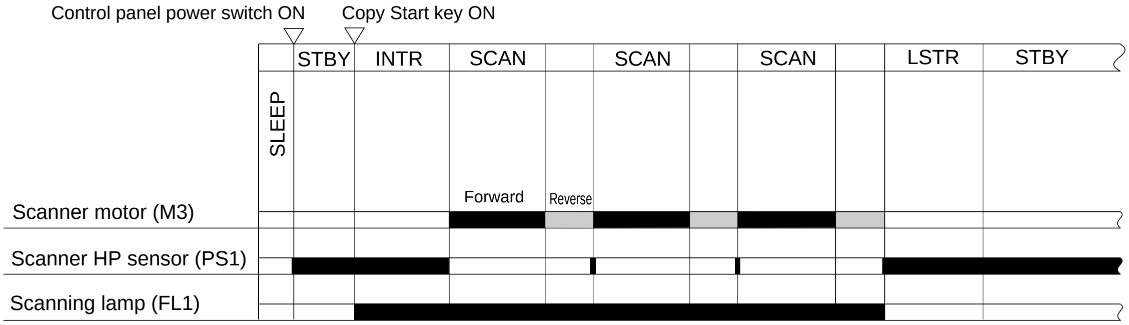

Control panel power switch ON
Copy Start key ON
SLEEP
STBY
INTR
SCAN
SCAN
SCAN
LSTR
STBY
Forward
Reverse
Scanner motor (M3)
Scanner HP sensor (PS1)
Scanning lamp (FL1)

Figure 3-101

II. SCANNER DRIVE SYSTEM

The No. 1/No. 2 mirror mount is driven by the scanner motor (M3). The scanner motor is a stepping motor, and is controlled by the image processor PCB.

The position of the No. 1 mirror mount is detected by the scanner home position sensor (PS1).

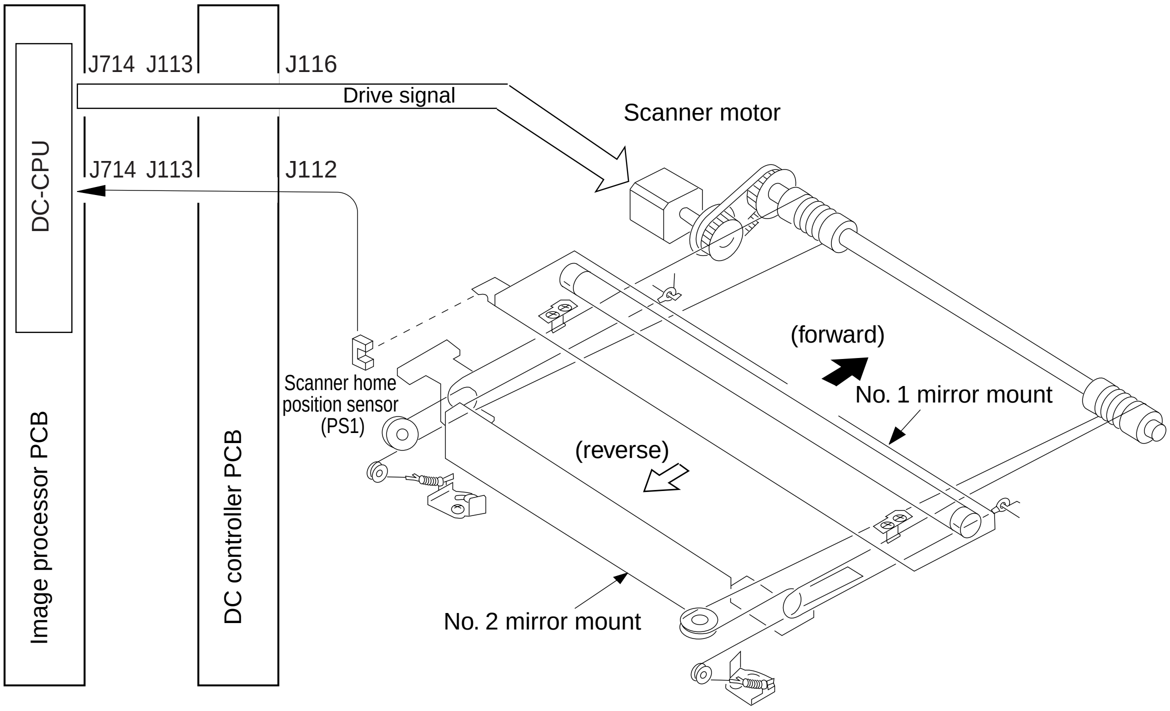

J714
J113
J116
Drive signal
Scanner motor
DC-CPU
J714
J113
J112
(forward)
Scanner home position sensor (PS1)
No. 1 mirror mount
(reverse)
Image processor PCB
DC controller PCB
No. 2 mirror mount

Figure 3-201

III. CONTROLLING THE SCANNING LAMP

A. Outline

The scanning lamp is a fluorescent lamp, and is turned on and off by the composite power supply PCB using the control signals from the image processor PCB. The PCB has the following functions:

- Controlling the scanning lamp pre-heating mechanism
- Turning on/off the scanning lamp
- Controlling the scanning lamp intensity

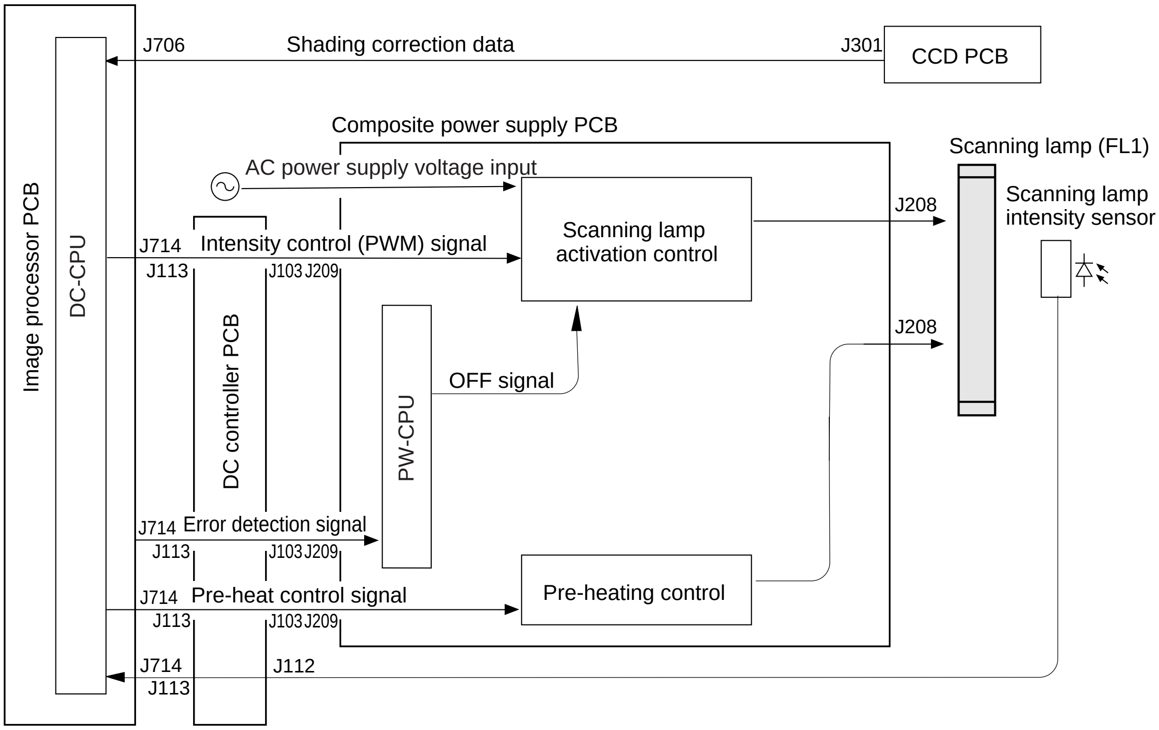


Image processor PCB
DC-CPU
J706
Shading correction data
J301
CCD PCB
Composite power supply PCB
Scanning lamp (FL1)
AC power supply voltage input
Scanning lamp intensity sensor
J208
J714
J113
Intensity control (PWM) signal
J103
J209
Scanning lamp activation control
J208
DC controller PCB
PW-CPU
OFF signal
J714
Error detection signal
J113
J103
J209
J714
Pre-heat control signal
J113
J103
J209
Pre-heating control
J714
J113
J112

Figure 3-301

B. Controlling the Pre-Heating Mechanism

The filament of the scanning lamp is kept powered so that the intensity of the scanning lamp will attain an optimum level in a short time after the Copy Start key is pressed (pre-heating).

The pre-heating state may be either full-preheating or lamp pre-heating.

a. Full Pre-Heating
About 4.2 V is applied to the filament during initial rotation.

b. Lamp Pre-Heating
About 3.8 V is applied to the filament during a copying run.

C. Turning On and Off the Scanning Lamp

The scanning lamp is turned on or off by the intensity control signal from the image processor PCB. A lamp activation voltage is applied to the scanning lamp in response to the signal.

D. Controlling the Intensity

The intensity control signal is a pulse signal, and the intensity of the scanning lamp is varied by changing the duty ratio of the signal. The output value of the scanning lamp intensity sensor is sent to the image processor PCB on a periodical basis for monitoring and maintaining the intensity at a specific level.

Related Service Mode

FUNCTION>CCD>MAN-ADJ	Determines an optimum activation voltage based on the results of shading auto correction.

E. Detecting Errors

If an error is detected, as when the scanning lamp fails to turn on in response to the intensity control signal, the DC-CPU on the image processor PCB sends an error detection signal to the PW-CPU on the composite power supply PCB.

When the PW-CPU receives an error detection signal, it generates the scanning lamp OFF signal without waiting for instructions from the image processor PCB and stops the ongoing operation. At the same time, an error code will be indicated on the control panel.

Related Error Code

E220	The scanning lamp turned on in standby state. The scanning lamp turned off during a copying run.
E301	The intensity of the scanning lamp fails to attain an optimum level.

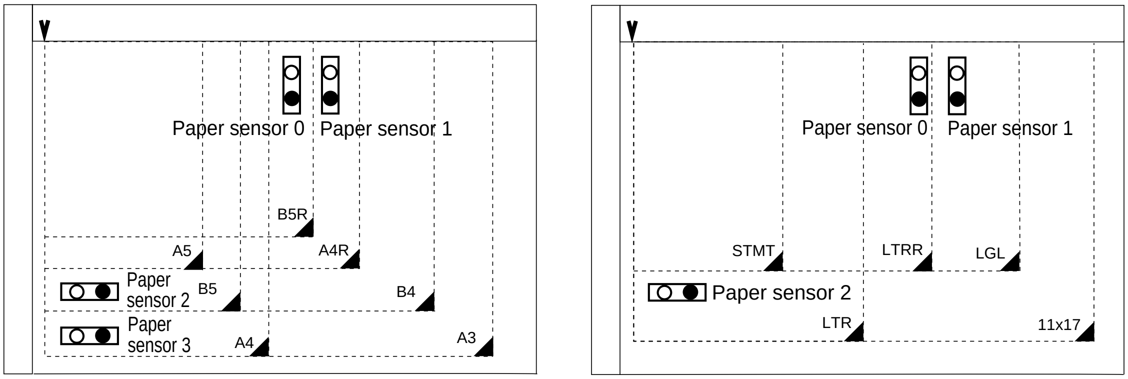
IV. IDENTIFYING THE SIZE OF AN ORIGINAL

A. Outline

The size of an original may be checked by the paper sensors mounted under the copyboard glass or by the original width/length sensor of the feeder.

B. Identifying the Size by the Paper Sensors (1)

The paper sensors are arranged under the copyboard glass (Figure 3-401) to identify the size of an original placed on the copyboard glass.



- AB Original Sensors
- Inch Original Sensors

Paper sensor 0
Paper sensor 1
B5R
A5
A4R
Paper sensor 2
B5
B4
Paper sensor 3
A4
A3
Paper sensor 0
Paper sensor 1
STMT
LTRR
LGL
Paper sensor 2
LTR
11x17

Figure 3-401 Arrangement of Original Sensors

When the copyboard cover is brought down to about 30¡, the photointerrupter (PS2) mounted at the rear turns on (i.e., light-blocking plate covers PS2). For 15 sec or until the Copy Start key is pressed after PS2 has turned on, the output level of each sensor is read at 0.1-sec intervals. The machine will identify the presence of an original at the sensor if its output level remains the same, and will then identify the size of the original according to specific combinations of sensor states (Tables 3-301, -202). This way of identification enables the use of dark originals.

The output level of each sensor, however, will not change under the conditions a or b below; in the case of c, A3 paper will be selected first (if the appropriate cassette is absent, the standard mode cassette will be selected).

a. An A3 dark original is used.
b. A book original is used. (The thickness of a book prevents the copyboard cover from closing enough, not changing the output levels of the sensors.)
c. The copyboard cover is not closed. (PS2 remains off.)

Reference:

In the case of a, b, or c, the size of the original may be identified wrongly.

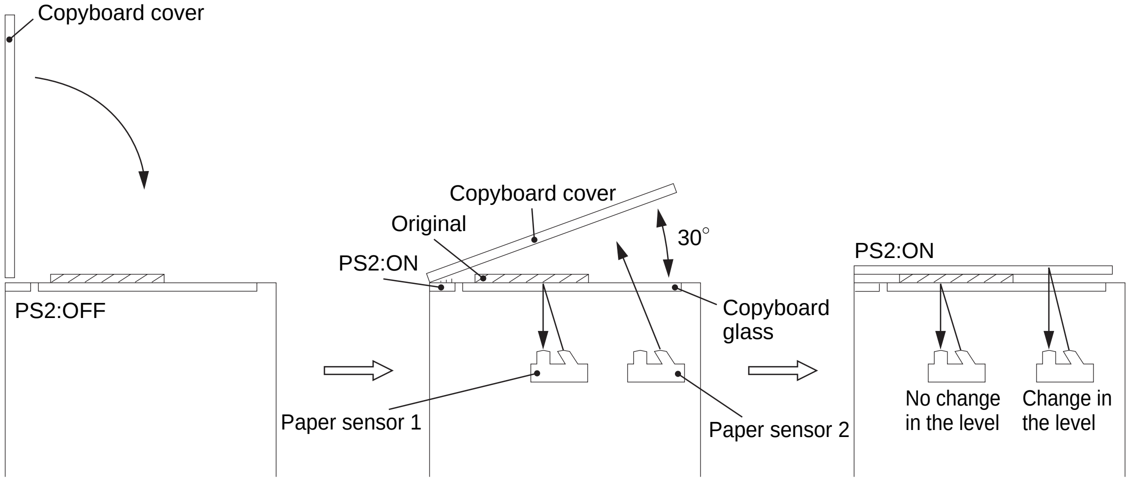

Copyboard cover
PS2:OFF
Copyboard cover
Original
PS2:ON
30°
Copyboard glass
Paper sensor 1
Paper sensor 2
PS2:ON
No change in the level
Change in the level

Figure 3-402

C. Identifying the Size by the Paper Sensors (2)

The image processor PCB identifies the size of an original based on the combination of sensor states:

In the table, "No" means th at the output level of the sensor did not change when it was read at intervals of 0.1 sec after it had turned on in response to the closing of the copyboard cover (detecting the presence of an original).

In the table, "Yes" means that the output level changed when it was read at intervals of 0.1 sec after it had turned on in response to the closing of the copyboard cover (detecting the absence of an original).

Original size	Original size sensor			
	0	1	2	3
A3	No	No	No	No
B4	Yes	No	No	No
A4R	Yes	Yes	No	No
A4	No	No	Yes	Yes
B5	Yes	No	Yes	Yes
B5R	Yes	Yes	No	Yes
No	Yes	Yes	Yes	Yes

Table 3-400 (A/B originals)

Original size	Original size sensor		
	0	1	2
11x17	No	No	No
LGL	Yes	No	No
LTR-R	Yes	No	Yes
LTR	No	Yes	Yes

Table 3-401 (Inch originals)

D. Identifying the Size by the Original Width/Length Sensor of the Feeder

The D-ADF (accessory) is designed to identify the size of an original with reference to its width set by the side guide plate and the length in feeding direction. As such, identification occurs as soon as an original is picked up, and is effective for the following default sizes:

A-configuration:	A5, A4, A4R, A3
B-configuration:	B5, B5R, B4
Inch-configuration:	STMT, LTR, LTRR, Foolscap, LGL, 11x17

V. DISASSEMBLY/ASSEMBLY

Be sure to keep the following in mind when disassembling or assembling the machine:

1. ⚠ Disconnect the power plug before starting the work.
2. For assembly, reverse the steps used for disassembly unless otherwise noted.
3. Identify the screws by type (length, diameter) and location.
4. The mounting screws used for the grounding wire and varistors are equipped with toothed washer to ensure electrical conductivity. Be sure to use the washers during assembly work.
5. As a rule, do not operate the machine with any of its parts removed.
6. Do not remove any of the paint-locked screws during disassembly work.

A. Scanning System

1. Removing the Scanning Lamp

Caution:
1. Do not start working if the scanning lamp is hot.
2. Do not leave fingerprints on the surface of the scanning lamp (especially its transparent area).
3. If the surface of the scanning lamp is soiled, dry wipe it.

1) Disconnect the power plug.
2) Remove the copyboard glass [1].

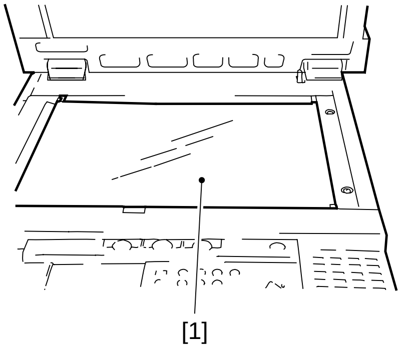


Figure 3-501

3) Remove the four screws, and detach the rear cover.
4) Remove the feeder unit or the copyboard cover; then, remove the two screws, and detach the rear upper cover.
5) Disengage the two hooks [3], and disconnect the connector; then, detach the scanner cooling fan.

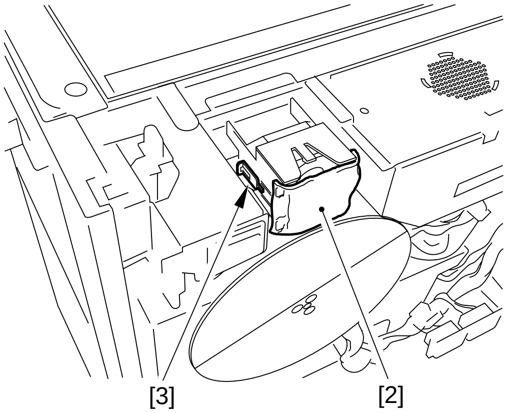


Figure 3-502

6) Move the No. 1 mirror mount so that it is as shown in the figure when viewed from the rear.
7) Remove the screw, and detach the fluorescent lamp cover [4]; then, pull out the scanning lamp.

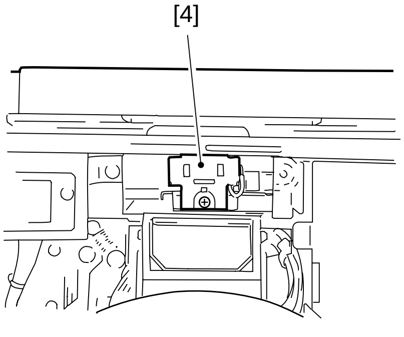


Figure 3-503

Caution:
The scanning lamp has its own orientation. Keep the following in mid when mounting it:
1. Keep the side with the manufacturer's name to the rear.
2. Keep the transparent side to the reflecting plate side.
3. Do not touch the transparent section.

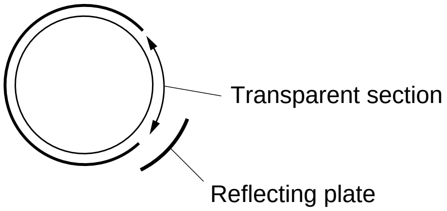


Figure 3-504

8) Execute the following in service mode:
   - FUNCTION>CCD>MAN-ADJ
   - FUNCTION>DENS (5 items)

2. Removing the Pre-Exposure Lamp Assembly

1) Remove the drum unit.
2) Remove the inside cover.
3) Remove the screw [2], and disconnect the connector [3]; then, detach the pre-exposure lamp assembly [1].

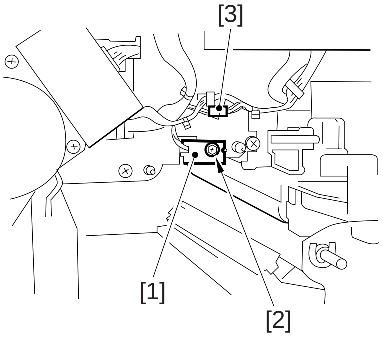


Figure 3-505

B. Scanner Drive Assembly

1. Removing the Scanner Drive Motor

1) Remove the copyboard glass.
2) Remove the rear cover and the rear upper cover.
3) Remove the flywheel.
4) Remove the two screws [2], and disconnect the two connectors [3]; then, detach the RDF connector mount [1].

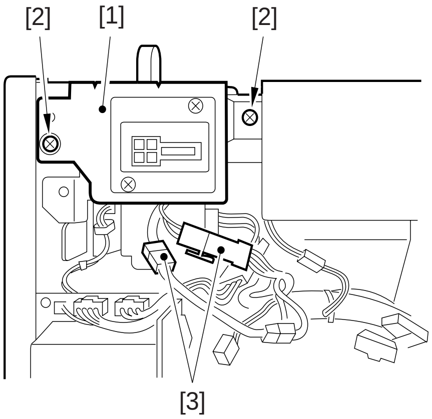


Figure 3-506

5) Remove the two screws, and disconnect the two connectors; then, detach the cooling fan unit [4].

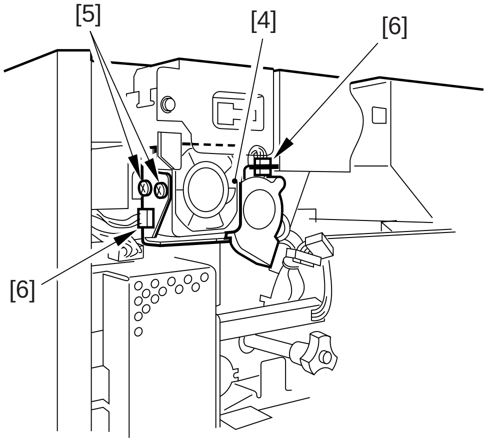


Figure 3-507

6) Remove the three screws [8], and disconnect the connector [9]; then, detach the scanner drive motor [7].

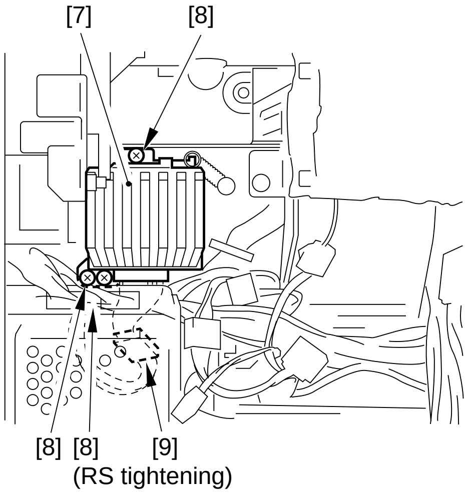


Figure 3-508

2. Removing the Scanner Cable

1) Remove the following:
   - Copyboard glass
   - Control panel
   - Rear cover, rear upper cover, right cover, left cover
2) Remove the metal fixings [1] of the scanner cable (both front and rear).

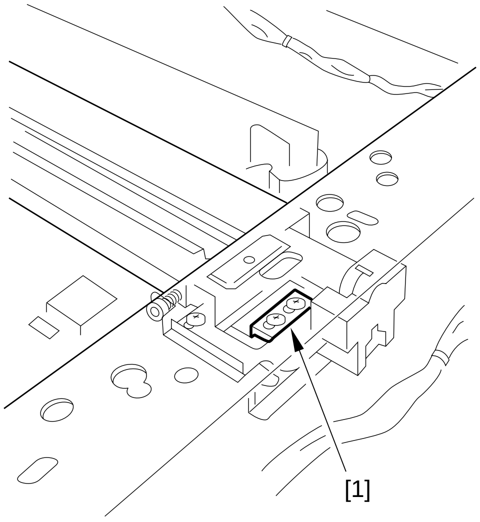


Figure 3-509

3) Loosen the two screws [3] to free the cable spring stay [2] (both font and rear).

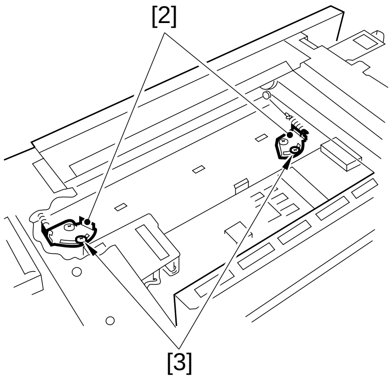


Figure 3-510

4) Loosen the set screws [4], and detach the cable (both front and rear).

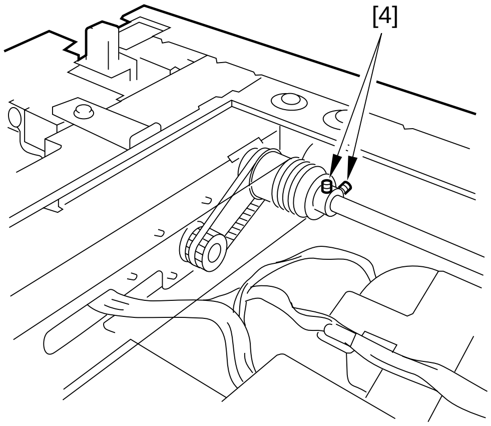


Figure 3-511

3. Routing the Scanner Cable

Caution:
You will need the following tools for routing the scanner cable:
1. Mirror mounting tool (FY9-3009-040)
2. Pulley clock (FY9-3037-000)

Perform the following in the order indicated:

1) Put the steel ball into the hole in the pulley [1]; then, wind the cable 4.5 times inward and 3.5 times outward (both front and rear).
2) Secure the cable in place with the pulley clip.
3) Fit the mirror positioning tool [2].
4) Fit the cable as shown [3] [4] [5] [6].
5) Loosen the set screw (font only) of the drive pulley and then tighten it so that the tension is even throughout [7].
6) Secure the No. 1 mirror mount and the scanner cable metal fixing in place temporarily [8].
7) Secure the cable spring stay so that the length of the spring is 38 to 39 mm [9].

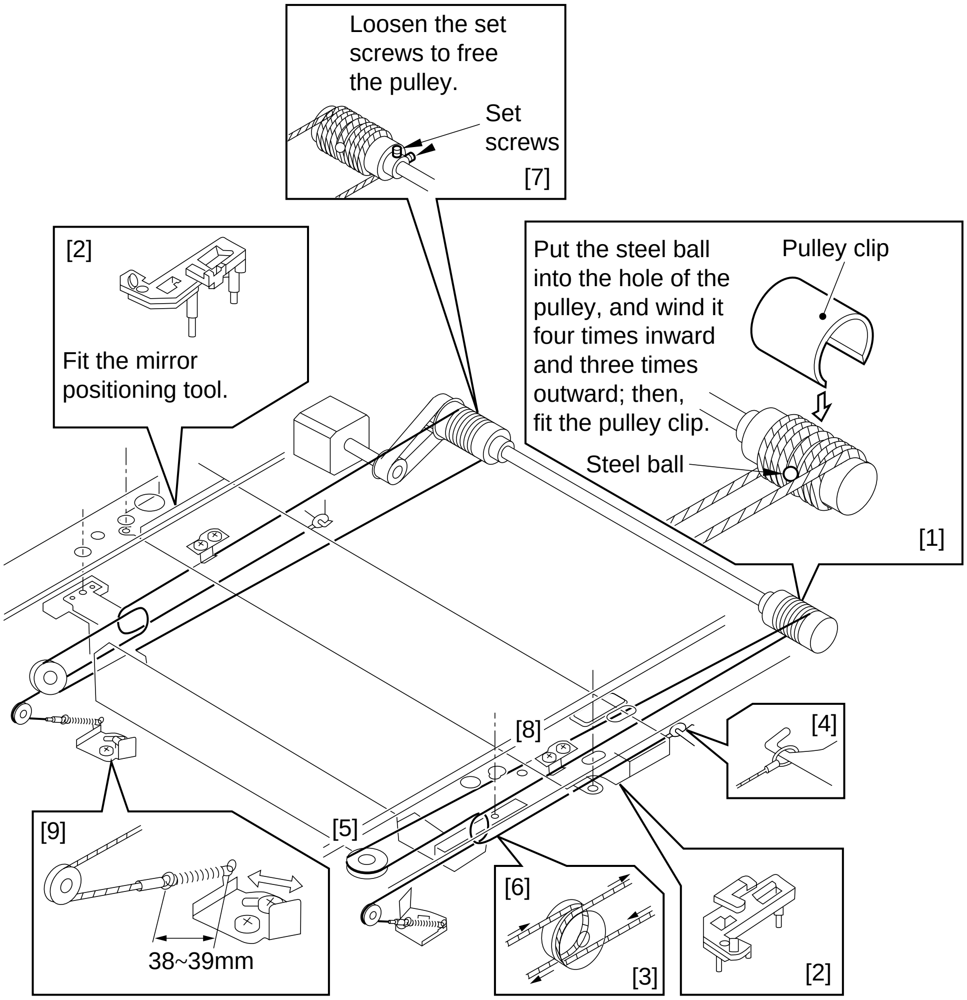

Loosen the set screws to free the pulley.
Set screws
[7]
[2]
Fit the mirror positioning tool.
Put the steel ball into the hole of the pulley, and wind it four times inward and three times outward; then, fit the pulley clip.
Pulley clip
Steel ball
[1]
[8]
[4]
[9]
[5]
[6]
38~39mm
[3]
[2]

Figure 3-512

4. Fitting the Mirror Positioning Tool

Use the mirror positioning tool FY9-3009-040 by changing its pin arrangement as shown below. Note that [1] [2] [3] in the figures indicate the locations of the pins, while [A] [B] [C] indicate the pins.

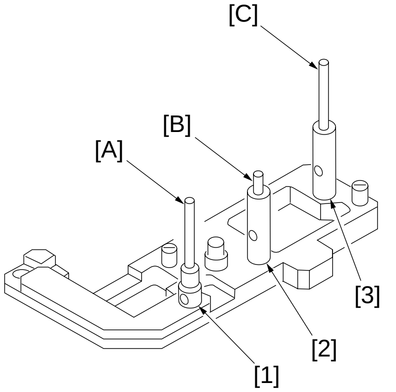


Figure 3-513 FY9-3009-040 Initially

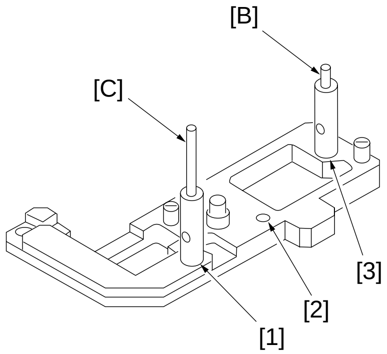


Figure 3-514 FY9-3009-040 Adapted for Use

Caution:
Note that pin [A] of the mirror positioning tool (FY9-3009-040) will not be used for the machine.

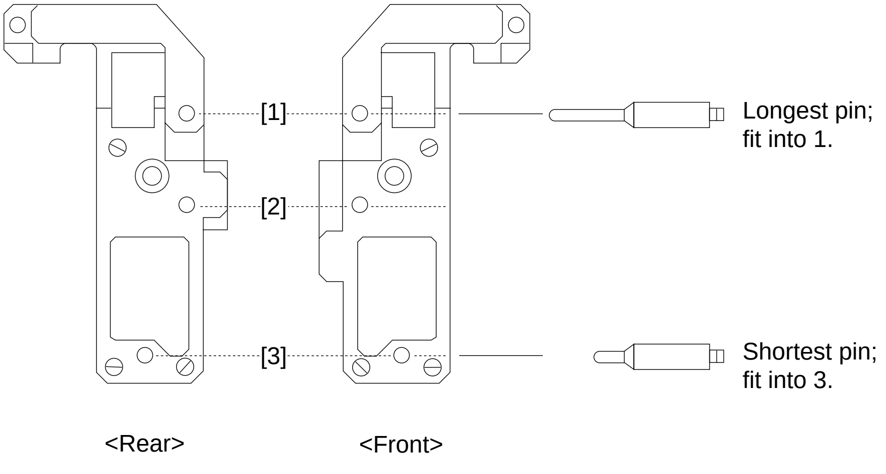

[1]
[2]
[3]
Longest pin;
fit into 1.
Shortest pin;
fit into 3.
<Rear>
<Front>

Figure 3-515

5. Adjusting the Mirror Position (optical length between No. 1 mirror and No. 2/No. 3 mirror)

1) Prepare the mirror positioning tool.
2) Move the No. 1 mirror mount forward, and match the hole in the upper front plate and the hole in the slide section of the No. 1/No. 2 mirror mount. (The same applies to the rear side plate.)
3) Fit the mirror positioning tool to the No. 1 mirror mount and the No. 2 mirror mount (both front and rear).

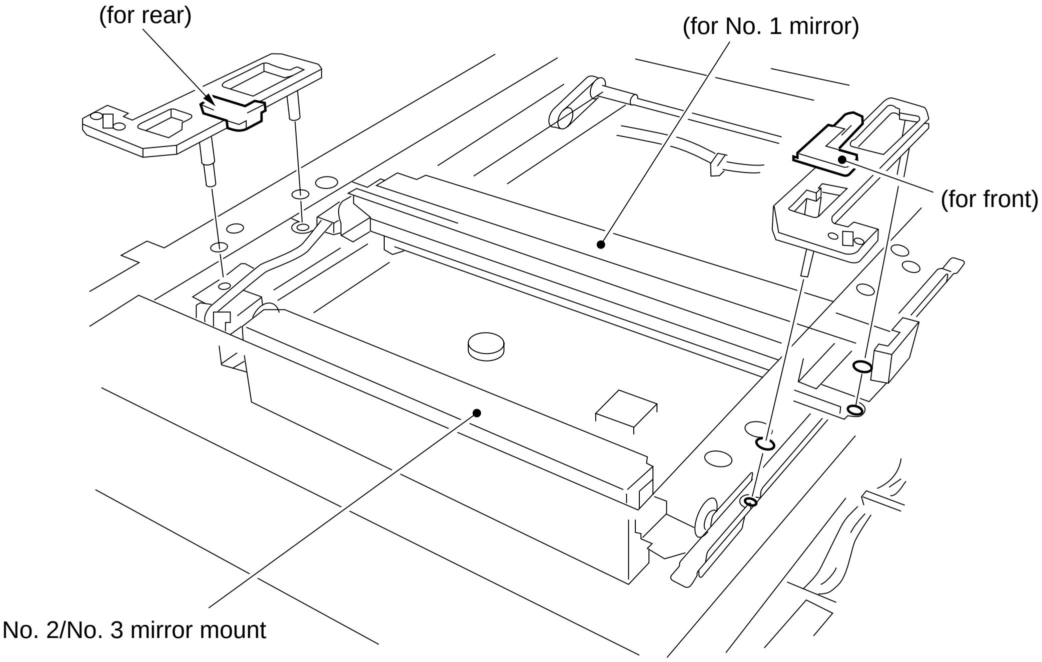


Figure 3-516

4) Tighten the set screws of the pulley.
5) Secure the scanner cable metal fixing in place to the No. 1 mirror mount.
6) Detach the tool.

CHAPTER 4

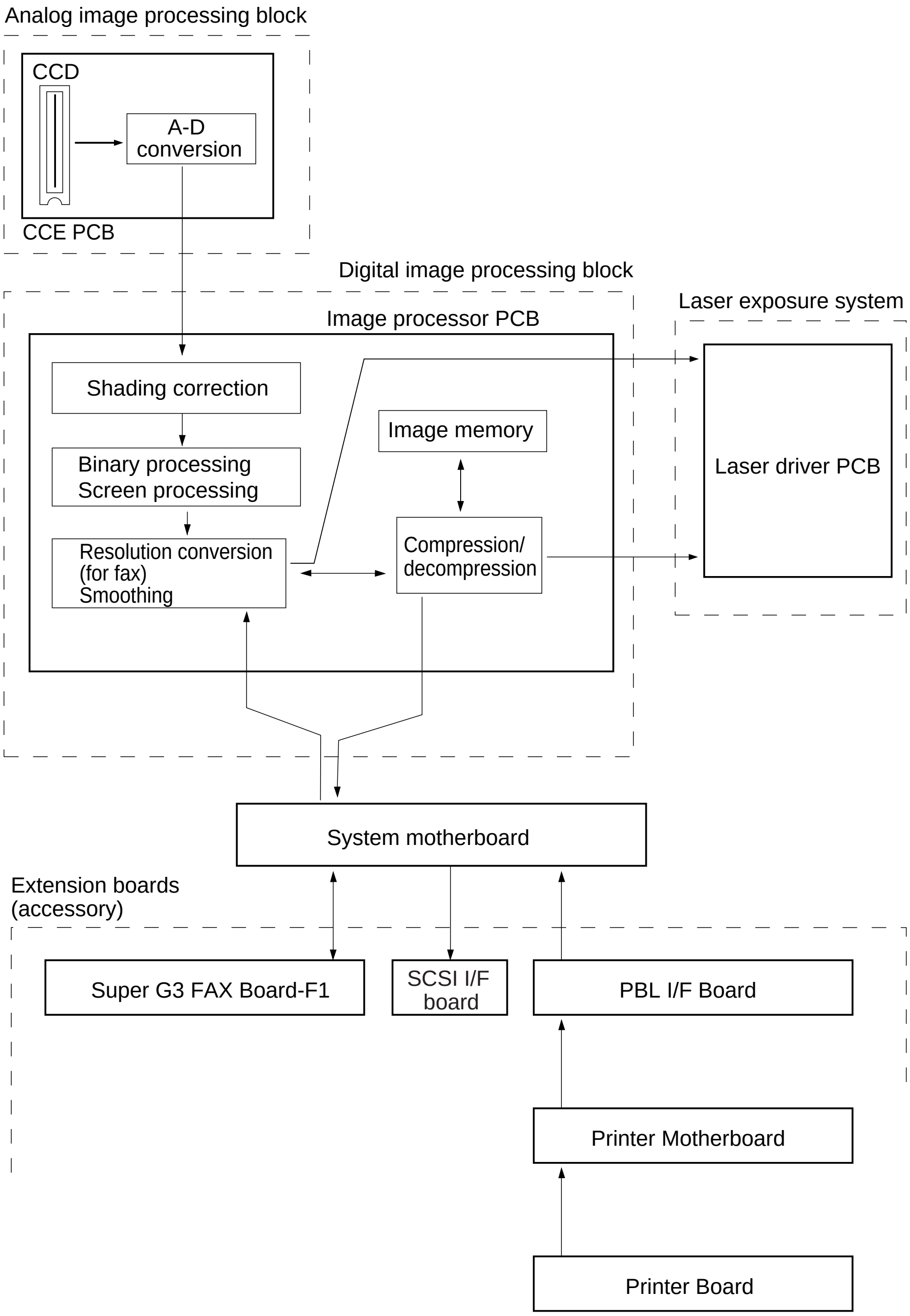
IMAGE FORMATION SYSTEM

I. OUTLINE 4-1
II. ANALOG IMAGE PROCESSING . 4-3
  A. Outline 4-3
  B. CCD 4-3
  C. AE Processing (ABC processing) 4-4
  D. A/D Conversion 4-5
  E. Analog Signal Processing Block 4-6
III. DIGITAL IMAGE PROCESSING ... 4-7
  A. Outline 4-7
  B. Shading Correction 4-8
  C. Total Processing 4-9
  D. Density Processing 4-12
  E. Binary Processing 4-16
  F. Image Memory 4-19
  G. Overlay Copying 4-21
IV. DISASSEMBLY/ASSEMBLY 4-22
  A. CCD Unit 4-23
  B. IP PCB 4-24
  C. Replacing the ROM DIMM (on the image processor PCB). 4-25

I. OUTLINE

The image processing system converts optical images projected onto the CCD into electrical signals (image signals) for correction and processing.

Various correction and processing are performed in the following PCBs, each sending resulting image signals to the next PCB.



Analog image processing block
CCD
A-D conversion
CCE PCB
Digital image processing block
Image processor PCB
Shading correction
Binary processing
Screen processing
Resolution conversion (for fax)
Smoothing
Image memory
Compression/ decompression
Laser exposure system
Laser driver PCB
System motherboard
Extension boards (accessory)
Super G3 FAX Board-F1
SCSI I/F board
PBL I/F Board
Printer Motherboard
Printer Board

Figure 4-100

PCB	Description	Remarks
CCD PCB	• CCD drive • AE processing (ABC processing) • A/D conversion	
Image processor PCB	• Shading correction • Various image processing • Density processing • Binary processing • Screen processing • Resolution conversion (for fax image) • Smoothing (for image memory) • Compression/decompression • Image storage	5 V to SCSI Board
System motherboard	• Relays image signals to and from extension boards • Supplies power to the Super G3 FAX Board	
Super G3 FAX Board-F1 (accessory)	Sends/receives image data through a modem	
PDL I/F board	Synchronizes image signals form extension printers	
Printer Motherboard	Supplies 12 V to the Extension Printer Board	
SCSI Interface Board	Transfers images read by the copies to an external computer	

Table 4-100

II. ANALOG IMAGE PROCESSING

A. Outline

The CCD PCB has the following functions:

- Driving the CCD.
- Performs A/D conversion of CCD output signals (analog)
- Performs AE processing (ABC processing)

B. CCD

The machine's CCD line sensor is a single-line linear image sensor consisting of 75000-pixel photocells. The signals photo-converted by the light-receiving unit are transferred to the analog signal processing block (odd- and even-numbered pixels are communicated separately). The analog signal processing block combines the signals representing odd- and even-numbered pixels, and sends the result to the A/D conversion block.

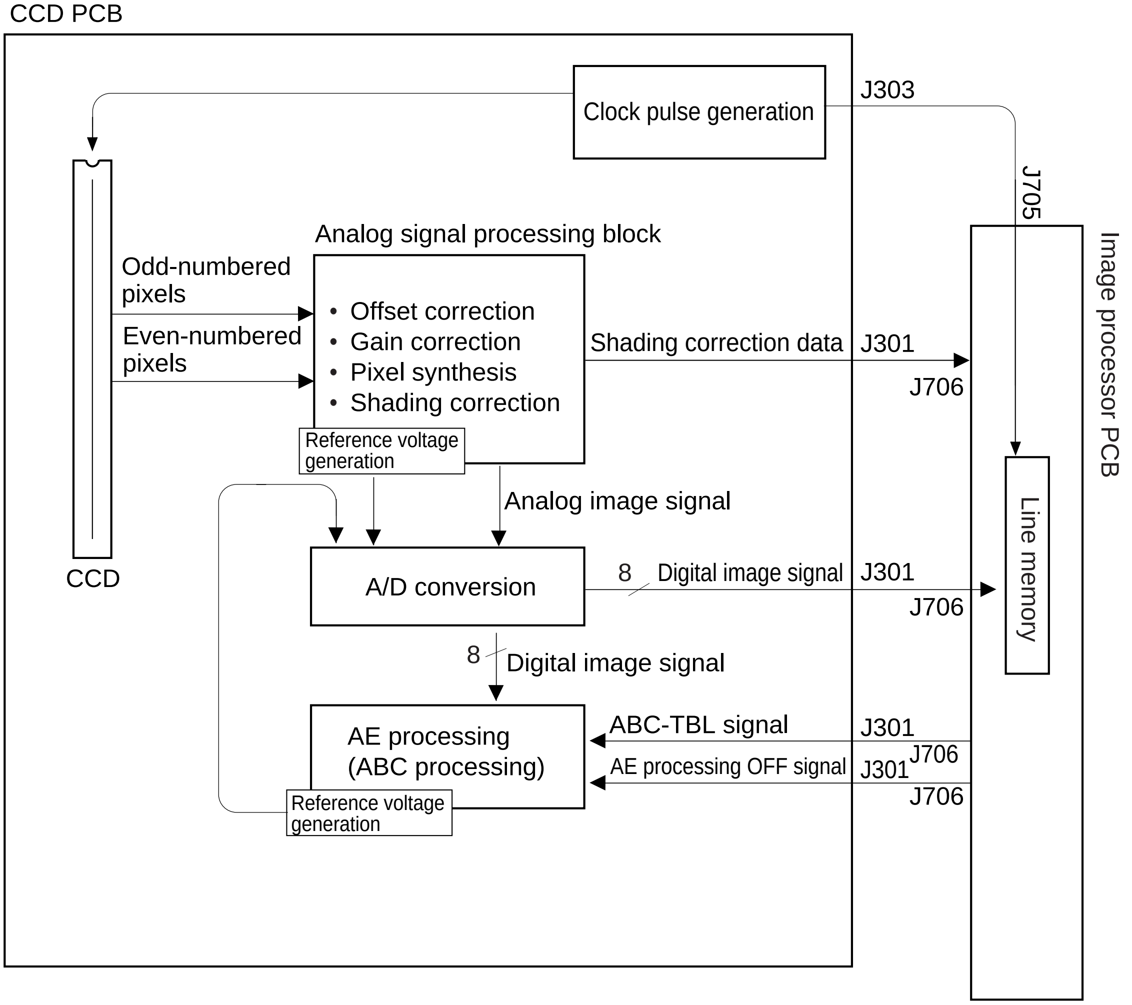
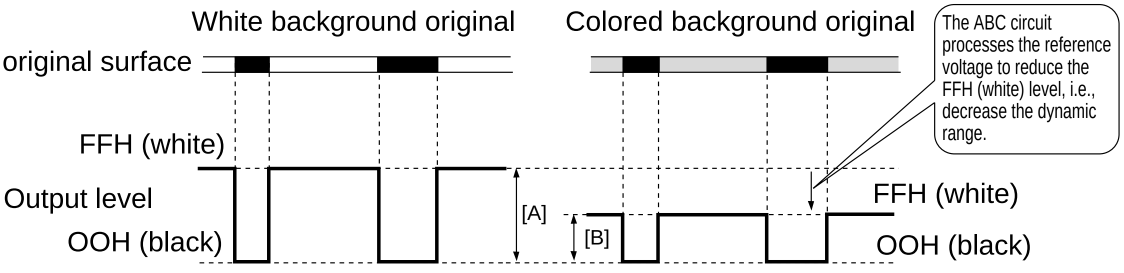

CCD PCB
Clock pulse generation
J303
J705
Image processor PCB
Analog signal processing block
Odd-numbered pixels
Even-numbered pixels
• Offset correction
• Gain correction
• Pixel synthesis
• Shading correction
Shading correction data
J301
J706
Reference voltage generation
Analog image signal
Line memory
CCD
A/D conversion
8
Digital image signal
J301
J706
8
Digital image signal
AE processing (ABC processing)
ABC-TBL signal
J301
J706
AE processing OFF signal
J301
J706
Reference voltage generation

Figure 4-200

C. AE Processing (ABC processing)

The machine's AE (auto density adjustment) mechanism processes image data on a line-by-line, real time basis (each single line in main scanning direction; it does not measure the density of an original by pre-scanning). In the AE processing block, digital image signals (resulting from A/D conversion) are returned to the ABC circuit of the following:

1) Based on the digital signals (1 line worth in main scanning direction) from the A/D conversion circuit, a maximum output image signal level (background, i.e., the lightest pixel of the original) is detected and used as Vtop.
2) Based on Vtop and Vbottom, i.e., the minimum output image signal level (the darkest pixel of the original), a density range is determined, and a reference voltage is determined so that the range may be expressed in 256 gradations.
3) The reference voltage is sent to the A/D conversion circuit.

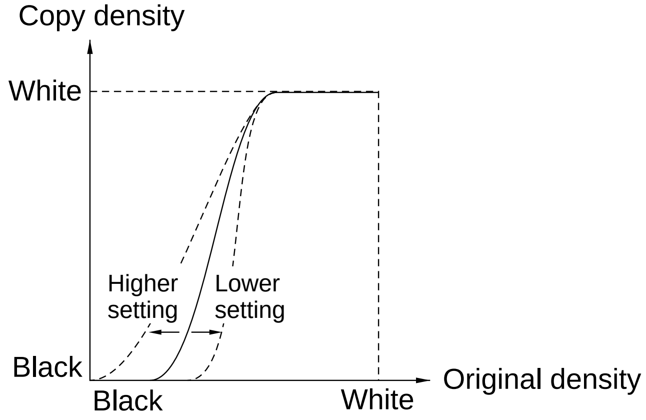


The ABC circuit processes the reference voltage to reduce the FFH (white) level, i.e., decrease the dynamic range.

[A] : Dynamic range of a white background original.
[B] : Dynamic range of a colored background original.

Figure 4-201

Related Service Mode

ADJUST>AE>AE-TBL	Use this mode to make adjustments if the density of text is tool light on a copy made in AE mode. Adjustments will vary the density correction curve; a lower setting will make the text darker. 

D. A/D Conversion

The A/D conversion circuit turns analog image signals from the CCD into 8-bit digital image signals. It produces linear, digital output in response to analog input; if E mode is selected, it performs A/D conversion based on the reference voltage from the AE processing block. Increases or decreases in the reference voltage will in turn increase or decrease the dynamic range (difference between maximum output level and minimum output level).

E. Analog Signal Processing Block

The analog signal processing block performs the following:

- Gain correction on image data from the CCD
- Offset correction on image data from the CCD
- Pixel synthesis on image data fro the CCD
- Measurement of the standard white plate/standard white paper
- Shading correction

Related Service Mode

FUNCTION>CCD>CCD-ADJ	Shading auto adjustment 1 (for normal image adjustment)
FUNCTION>CCD>MAN-ADJ	Shading auto adjustment 2 (for lamp/PCB replacement)

III. DIGITAL IMAGE PROCESSING

A. Outline

The digital image processing block processes image signals from the analog image processing block or from the various extension boards. Figure 4-300 is a block diagram showing the items of processing.

In the case of making a single copy (a single copy from a signal original), the image data is converted to 12000-dpi (equivalent) images by smoothing after binary processing, and is sent to the laser driver PCB (direct copying). In other cases, image data is stored in memory first and then transferred to the laser driver PCB (memory copying).

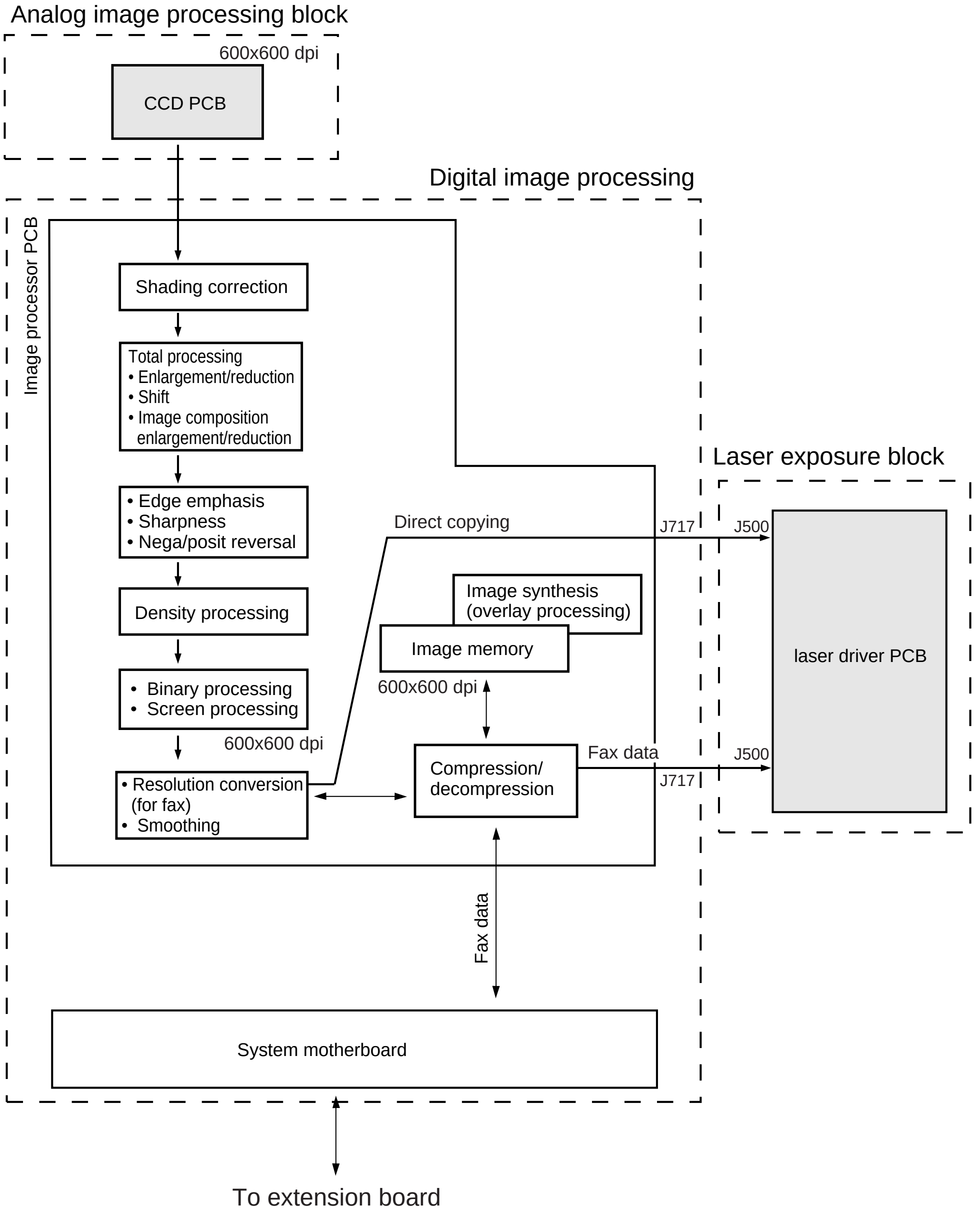

Analog image processing block
600x600 dpi
CCD PCB
Digital image processing
Image processor PCB
Shading correction
Total processing
• Enlargement/reduction
• Shift
• Image composition enlargement/reduction
• Edge emphasis
• Sharpness
• Nega/posit reversal
Density processing
• Binary processing
• Screen processing
600x600 dpi
• Resolution conversion (for fax)
• Smoothing
Direct copying
Image synthesis (overlay processing)
Image memory
600x600 dpi
Compression/ decompression
Fax data
J717
J500
J717
J500
Laser exposure block
laser driver PCB
Fax data
System motherboard
To extension board

Figure 4-300

B. Shading Correction

The output of the CCD does not necessarily match the light reflected by an original (although the original may have an even density) for the following reasons:

1. The sensitivity differs from one pixel of the CCD to another.
2. The degree of lens transmission is different between middle and edges.
3. The intensity of the scanning lamp is different between middle and edges.
4. The scanning lamp deteriorates.

The resulting variations are corrected by means of shading: shading correction executed for each copying run, and shading auto correction whose target value is set in service mode.

1. Shading Auto Correction

Shading auto correction is executed in service mode (FUNCTION>CCD>MAN-ADJ).

In shading auto correction, the density of the white standard plate and white paper is measured (by the CCD PC), and the collected data is stored in memory. The data is then subjected to computation, and the result will be used as the "target value" at time of shading correction.

2. Shading Correction

Shading correction is executed for each scan of an original. The light of the scanning lamp is directed to the standard white plate (Figure 4-301), and the light reflected by the plate is converted into digital signals by the CCD PCB. The resulting digital signals are sent to the shading circuit on the image processor PCB as shading data.

The shading circuit compares the shading data against the target value stored in memory, and sets the difference as the shading correction value.

The shading correction value is used to correct the variation among the pixels of the CCD occurring during scanning operation, thereby evening out the image density level.

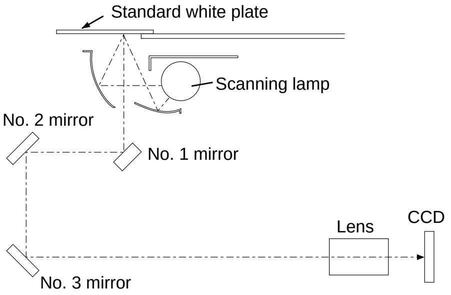


Figure 4-301

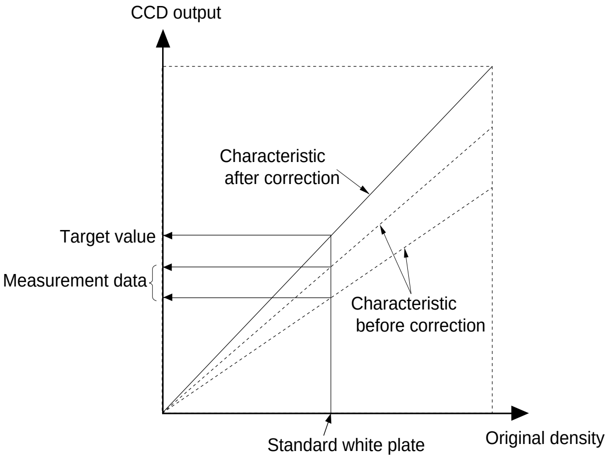


Figure 4-302

C. Total Processing

The total processing block performs the following:

- Enlargement/reduction
- Shift
- Negative/positive reversal
- Image composition enlargement/reduction
- Edge emphasis
- Sharpness

Unlike the existing models, the machine uses different methods for enlargement/reduction and image composition.

1. Enlargement/Reduction

For the vertical ratio (sub scanning direction), the scanner is moved at different speeds, thereby changing the scanning width per pixel in relation to an original.

In the case of a ratio lower than 50%, data units are skipped when writing them into memory for sub scanning direction.

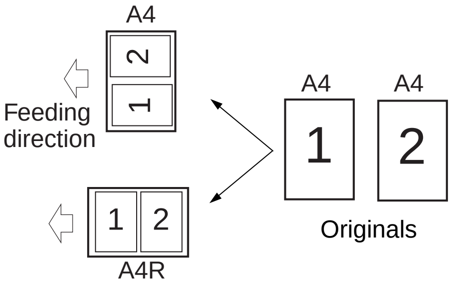
2. Image Composition

In image composition, n originals are placed on a single sheet. The mode may be either of the following:

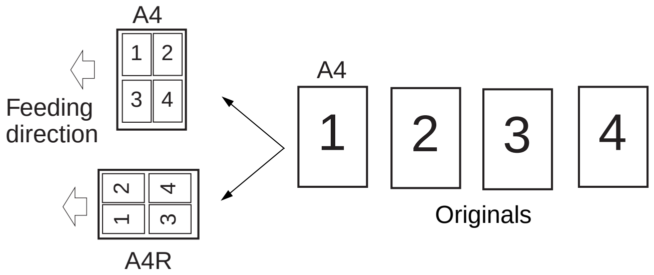
1. 2-on-1 mode, in which two originals are copied by reduction on one sheet of copy paper.
2. 4-on-1 mode, in which four originals are copied by reduction on one sheet of copy appear.
3. 8-on-1 mode, in which eight originals are copied by reduction on one sheet of copy paper.

The images will be laid out as follows according to the selected mode, original size, and copy size:

2-on-1


A4
2
1
Feeding direction
A4
A4
1
2
Originals
1
2
A4R

4-on-1


A4
1
2
3
4
Feeding direction
A4
1
2
3
4
Originals
2
4
1
3
A4R

8-on-1

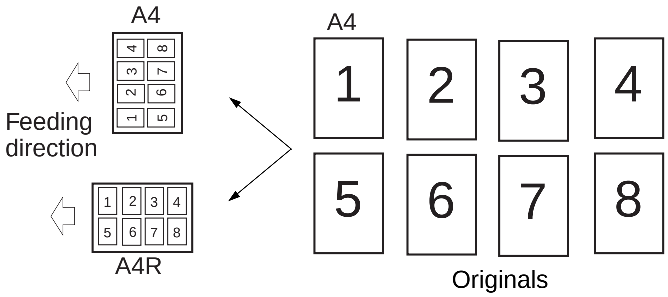

A4
4
8
3
7
2
6
1
5
Feeding direction
A4
1
2
3
4
5
6
7
8
1
2
3
4
5
6
7
8
A4R
Originals

Figure 4-303

For the mode, images must be processed by combination of enlargement/reduction processing and shift processing, and the flow of processing will be as shown in Figure 4-304:

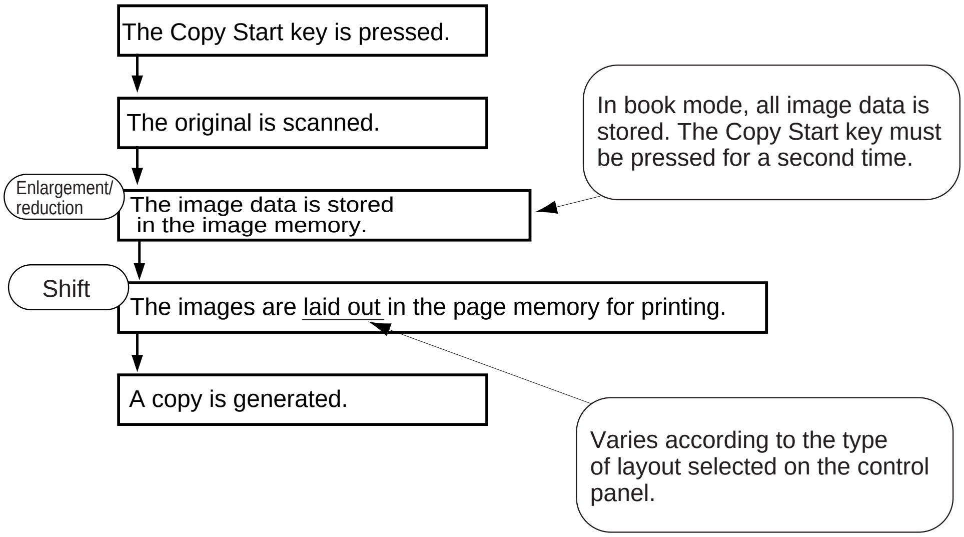

The Copy Start key is pressed.
The original is scanned.
In book mode, all image data is stored. The Copy Start key must be pressed for a second time.
Enlargement/ reduction
The image data is stored in the image memory.
Shift
The images are laid out in the page memory for printing.
A copy is generated.
Varies according to the type of layout selected on the control panel.

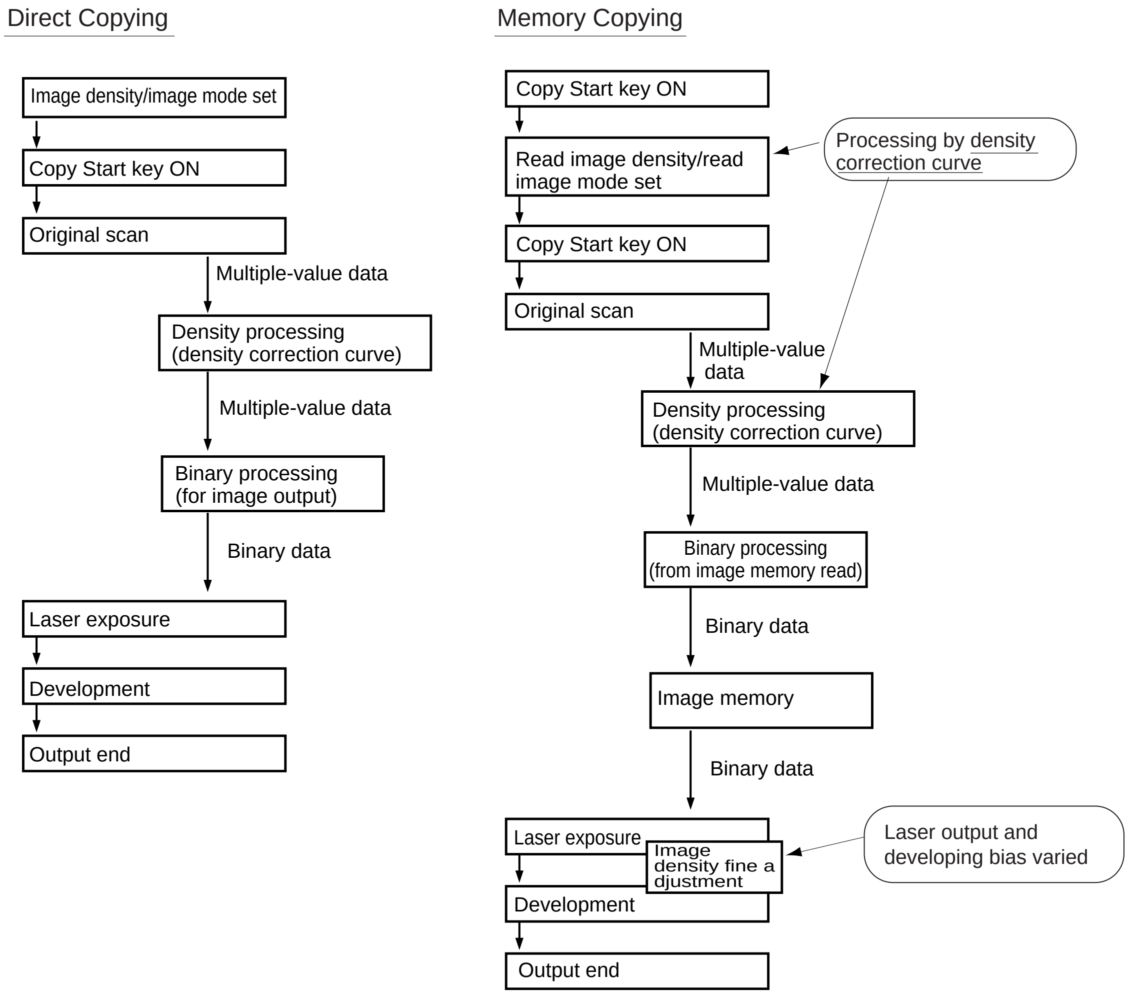
Figure 4-304

For enlargement/reduction, the ratio is computed based on the size of the original and the size of the copy paper. If the lengthwise ratio and the breadthwise ratio are different, the smaller of the two will be selected. (However, the ratio is always between 25% and 800%.)

D. Density Processing

1. Outline

Density processing takes place differently between direct copying and memory copying; i.e., when making one copy of one original and when making multiple copies of one original. The flow of processing will be as follows:



Direct Copying
Image density/image mode set
Copy Start key ON
Original scan
Multiple-value data
Density processing (density correction curve)
Multiple-value data
Binary processing (for image output)
Binary data
Laser exposure
Development
Output end
Memory Copying
Copy Start key ON
Read image density/read image mode set
Processing by density correction curve
Copy Start key ON
Original scan
Multiple-value data
Density processing (density correction curve)
Multiple-value data
Binary processing (from image memory read)
Binary data
Image memory
Binary data
Laser exposure
Image density fine a djustment
Laser output and developing bias varied
Development
Output end

Figure 4-305

When reading an image, digital processing may take place using a density correction curve for handling multiple-value data; however, since binary data is used when generating output in memory copying (not having density information), the laser intensity and the developing bias are varied for the reproduction of density (as if in analog mode).

2. Density Correction Curve

The density correction curve for density processing varies according to the following:

- Copy Density key/Density Correct key on the control panel
- Text, Text/Photo, Photo mode
- Photosensitive drum resistance (result of measurement)

a. Coy Density Key/Density Correct Key

The density correction curve varies as shown according to the key settings.

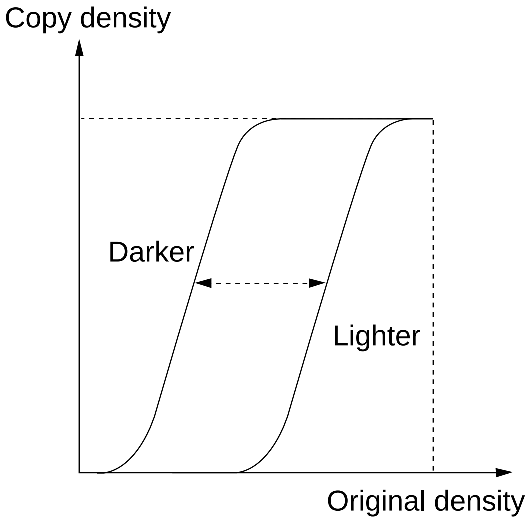


Figure 4-306

b. Text, Text/Photo, Photo Mode

When text mode is selected, the contrast is increased by using a steep density correction curve. When text/photo or photo mode is selected on the other hand, a curve that ensures better gradation and reproduction of the original density is selected.

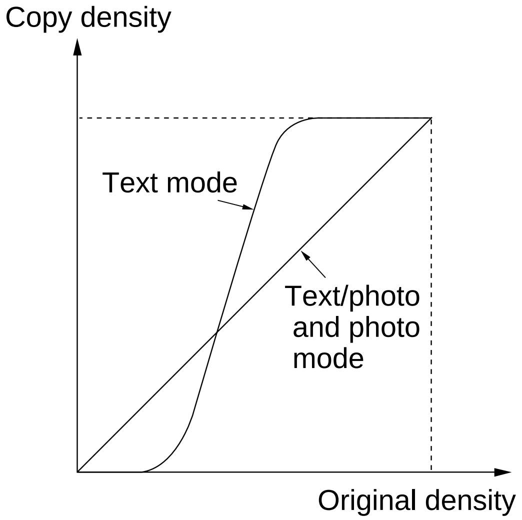


Figure 4-307

c. Photosensitive Drum Resistance

The surface coating of the photosensitive drum tends to become worn over time, causing its photosensitive medium to become thinner and, ultimately, affecting its charging characteristics. To ensure the production of stable image, the resistance is measured and the density correction curve is varied according to the result of measurement.

The surface of the photosensitive drum is charged to a specific voltage (AC + DC).

⇩

Application current values are sampled while charging takes place to compute the resistance of the photosensitive drum.

The resistance is checked at such times as shown below:

- During initial rotation after the Copy Start key is pressed.
- During initial rotation after the front door is opened and closed (other than for jam removal).
- During initial rotation after the control panel power switch is turned on.
- During initial rotation after making 500 copies/prints.

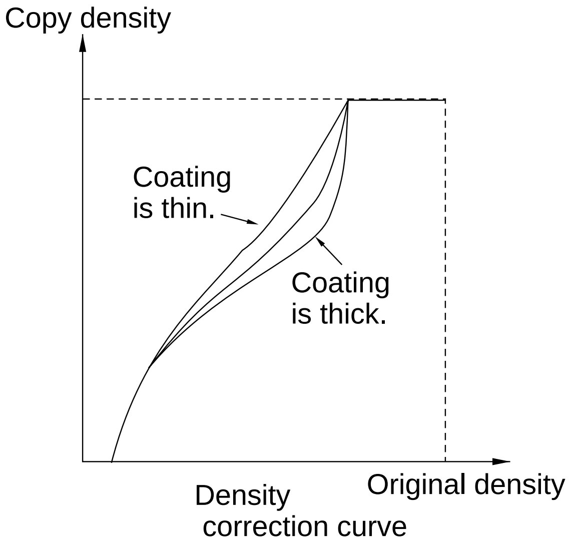


Figure 4-308

3. Density Correction for Memory Copying

When generating output during memory copying, binary image data stored in the image memory is processed, not allowing the use of a density correction curve for density processing and, instead, requiring variation of the developing bias for the laser intensity.

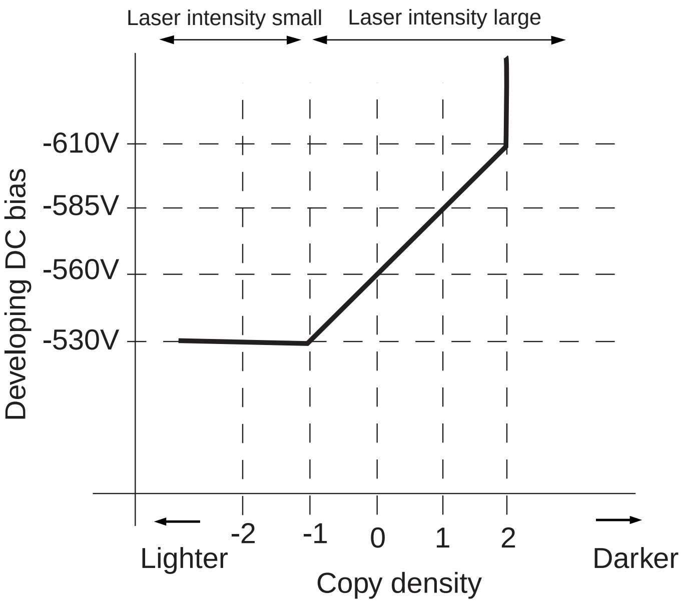


Figure 4-309

The copy density is reduced (images made lighter) by decreasing the developing bias. An excessive decrease, however, will make the images fuzzy, and the laser intensity is deceased instead to avoid the problem.

E. Binary Processing

The image data read by the scanner is turned into binary data after density processing (with a density correction curve). In the case of fax output, resolution conversion takes place, requiring a different method of binary processing. Different binary processing methods are also used for different image modes (text, photo).

1. Binary Processing (text mode, text/photo mode)

Step 1 The average of the densities of the adjacent pixels is computed to determine a slice level, and the pixel in question is identified as "black" if its density is higher than the slice level and "white" if otherwise. The pixel in question tends to be black if it is surrounded by dark pixels, and tends to be white if otherwise. The degree of probability, further, also varies according to the density data of the pixel in question.

The pixel in question tends to be white since it is surrounded by white pixels.

The pixel in question tends to be black since it is surrounded by black pixels.

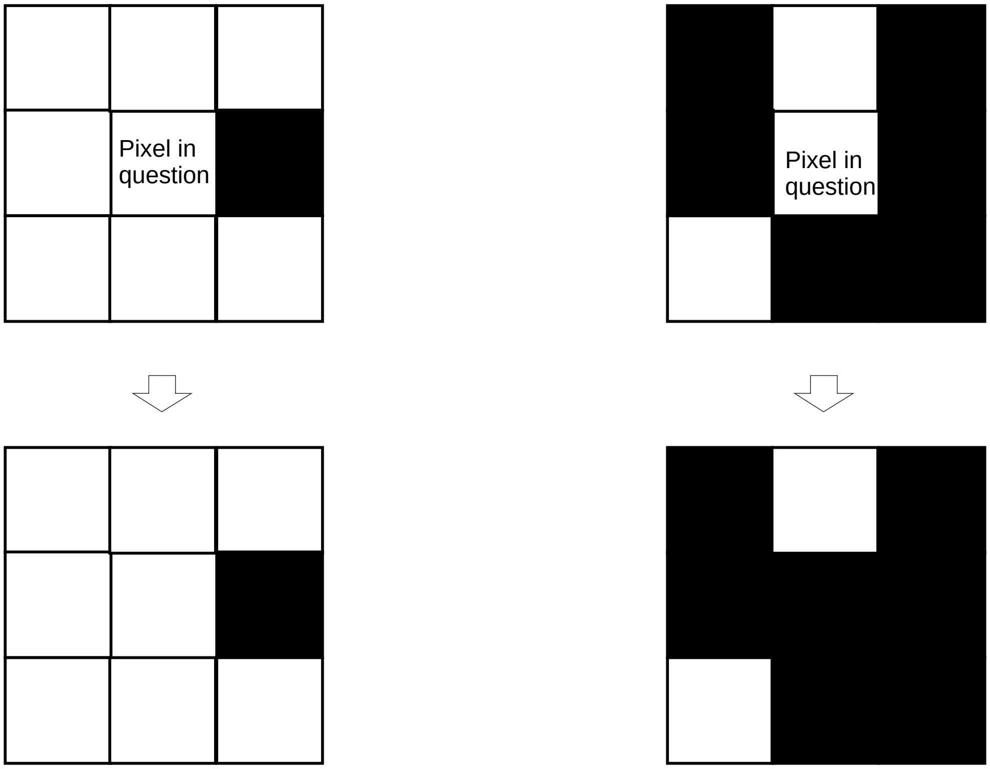


Figure 4-310

Step 2 The binary image data is then subjected to smoothing, thereby increasing the initial resolution of 600 x 600 dpi to 1200 x 600 equivalent.

2. Binary Processing (photo mode)

In photo mode, image data is subjected to screen processing, enabling 256 gradations while still using binary image data. The flow of processing is as shown in Figure 4-311.

As many as 4 x 8 pixels are treated as a single unit, and pixels are distributed into 256 patterns according to the mode of density distribution. The units of 4 x 8 pixels are divided so that the pixels in question are arranged at 45°, forming a screen pattern.

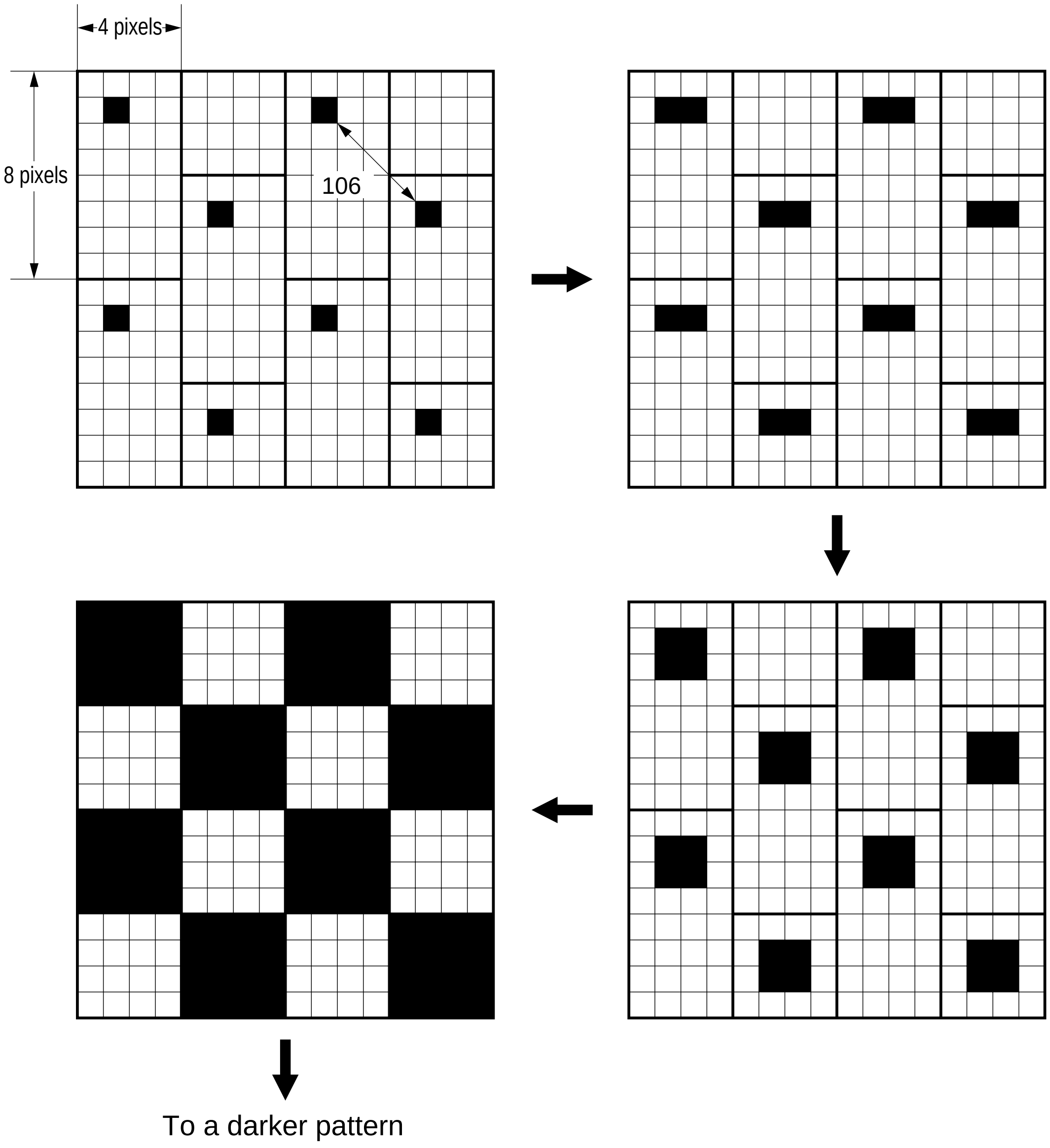


Figure 4-311

3. Binary Processing for Fax Transmission/Reception

The flow of image data for fax transmission/reception is as follows:

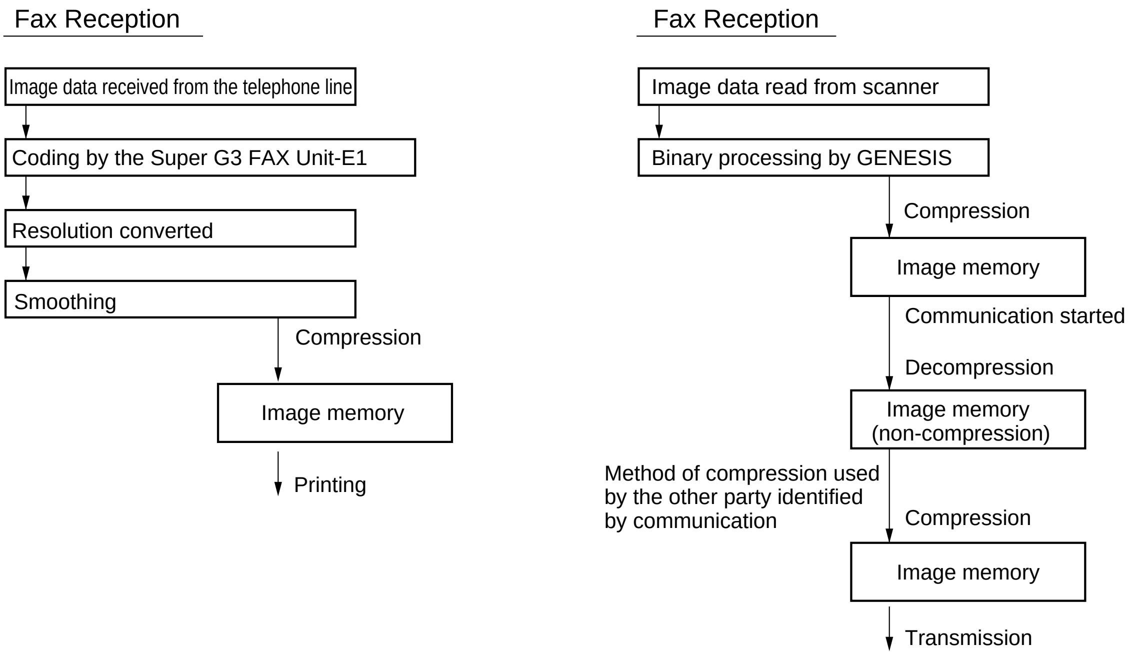

Fax Reception
Image data received from the telephone line
Coding by the Super G3 FAX Unit-E1
Resolution converted
Smoothing
Compression
Image memory
Printing
Fax Reception
Image data read from scanner
Binary processing by GENESIS
Compression
Image memory
Communication started
Decompression
Image memory (non-compression)
Method of compression used by the other party identified by communication
Compression
Image memory
Transmission

Figure 4-312

F. Image Memory

The machine is equipped with an image memory, and image data is stored in it (memory copying) except when making one copy of one original (direct copying). The image memory consists of a page storage area, in which compressed image data is stored on a page-by-page basis, and a work area, in which images read by the scanner is stored temporarily for rotation or compressed data (after processing) is stored temporarily.

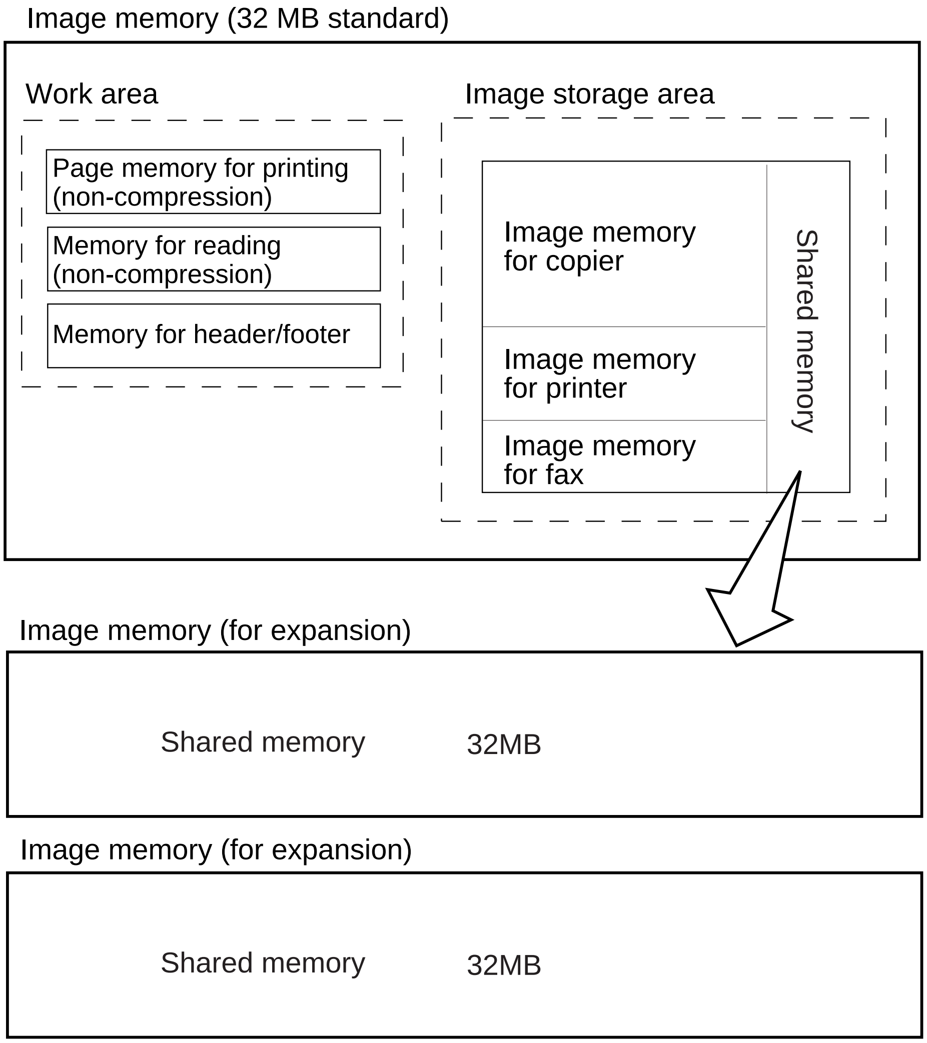


Image memory (32 MB standard)
Work area
Page memory for printing (non-compression)
Memory for reading (non-compression)
Memory for header/footer
Image storage area
Image memory for copier
Image memory for printer
Image memory for fax
Shared memory
Image memory (for expansion)
Shared memory
32MB
Image memory (for expansion)
Shared memory
32MB

Figure 4-313

The machine comes with an image memory of 32 MB as standard, and allows expansion up to 96 MB (32 MB x 2). The increased area will be used as common memory for page storage.

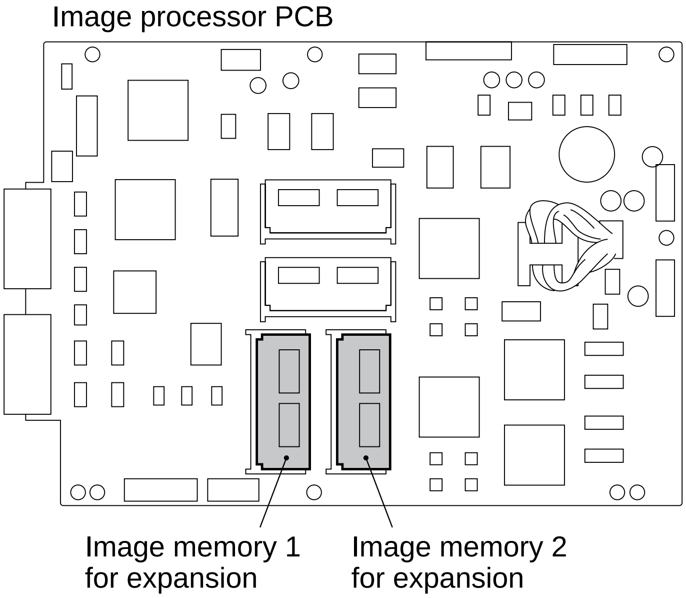


Image processor PCB
Image memory 1 for expansion
Image memory 2 for expansion

Figure 4-314

Installation of memories must be in a specific sequence: always with memory 1 and then memory 2.

G. Overlay Copying

The machine uses its image memory for overlay processing, and the flow of processing is as follows:

The Copy Start key is turned down.

⇩

The original is scanned.

⇩

The image data is subjected to enlargement/reduction, and the result is stored in the page storage area.

⇩

The reading operation ends.

⇩

The image is laid out in the page memory for printing.

⇩

Copies are generated.

IV. DISASSEMBLY/ASSEMBLY

Be sure to observe the following when disassembling/assembling the parts:

1. ⚠ The power plug must be disconnected before starting the work.
2. The steps used to disassemble the parts must be reversed when assembling them, unless otherwise noted.
3. The screws must be identified by type (length, diameter) and location.
4. The washer used with a specific mounting screw (e.g., for grounding wire and varistor) must not be left out to ensure electric conductivity.
5. The screws that are paint-locked in place must not be removed during disassembly work.
6. The machine must not be operated with any of its parts removed, unless otherwise required.

A. CCD Unit

1. Removing the CCD Unit

1) Disconnect the power plug.
2) Remove the copyboard glass.
3) Remove the six screws, and detach the CCD unit cover [1].

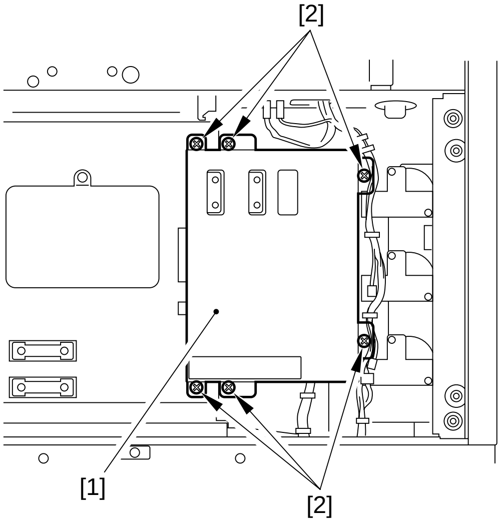


Figure 4-400

4) Remove the screw, and detach the original size sensor [2] to keep it away from the CCD unit.

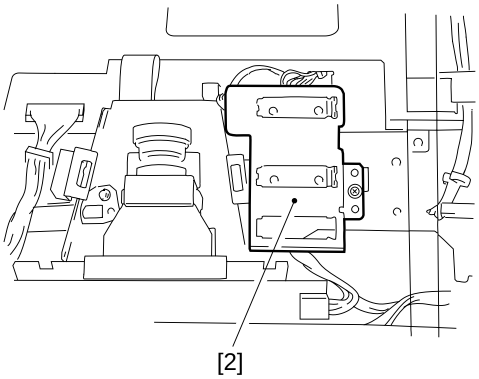


Figure 4-401

5) Remove the grounding wire [3], disconnect the two connectors [4], and remove the cable [5].
6) Remove the screw (1 pc. each), and detach the CCD unit stop spring [6]; then, detach the CCD unit.

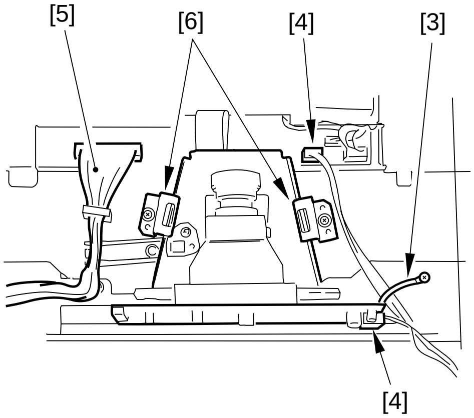


Figure 4-402

Caution:
Do not remove the screws that are pain-locked in place.
Particularly, never remove the screws [7] indicated in Figure 4-403.

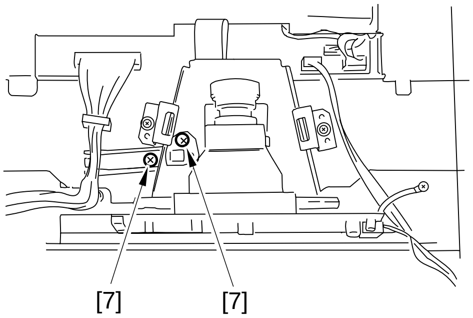


Figure 4-403

B. IP PCB

1. Removing the IP PCB

1) Remove the copyboard glass.
2) Remove the CCD unit cover.
3) Remove the screw of the original size sensor mount (right), and keep it away from the IP cover. (Figure 4-502)
4) Remove the four screws [1], and detach the IP cover [2] (small window).

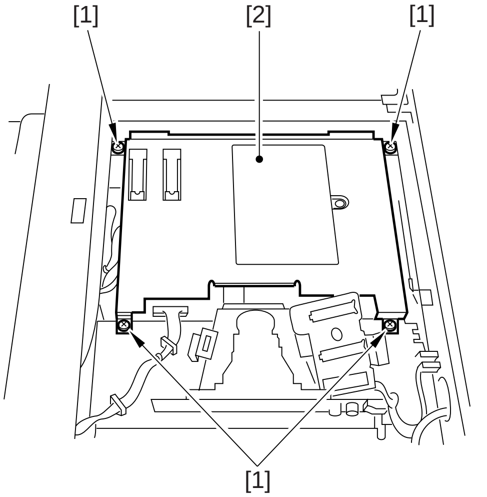


Figure 4-404

5) Disconnect the two connectors of the original sensor mount (right; step 3)).
6) Remove the screw [4], and disconnect the two connectors [5]; then, detach the original sensor mount (left) [3].

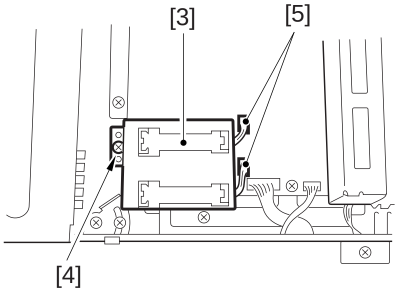


Figure 4-405

7) Disconnect the 11 connectors of the IP PCB [6].

Caution:
Do not forget to disconnect the connector [8].

8) Remove the seven screws [7] of the P PCB; then, detach the IP PCB.

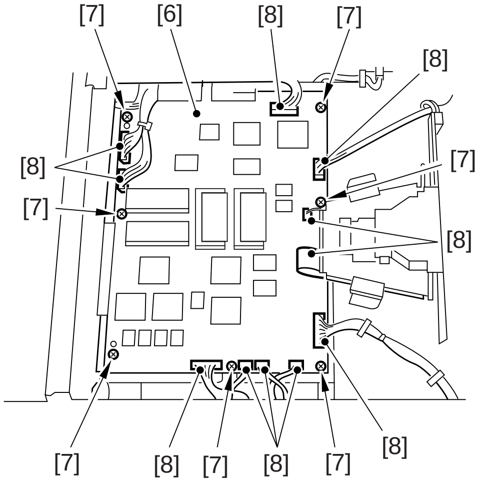


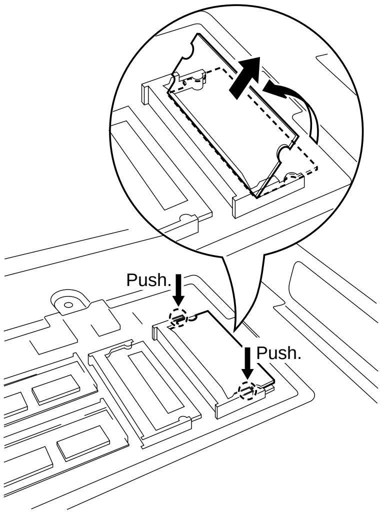
Figure 4-406

Caution:
- When moving the No. 1 mirror mount unit to the home position, be sure not to apply force.
- When mounting the image processor PCB, take care no to inadvertently route the harness connecting the image processor PCB and the BD PCB over the light-receiving face of the BD PCB. Such would hinder correct BD detection.

C. Replacing the ROM DIMM (on the image processor PCB)

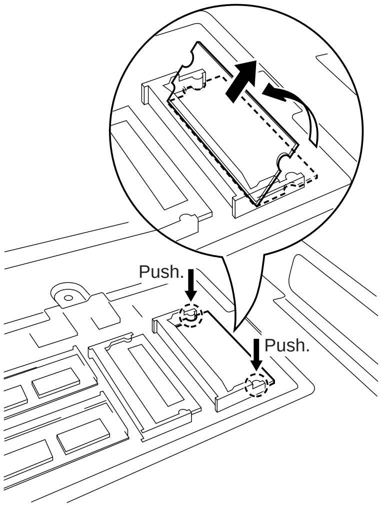
1. Removing the ROM DIMM

1) Turn off the main power switch.
2) Disconnect the power cord.
3) Remove the copyboard glass, and remove the ROM cover.
4) While opening the claws of the slot, lift and pull out the ROM DIMM.



Removing the Top DIMM

Figure 4-407



Removing the Bottom DIMM

Figure 4-408

2. Mounting the ROM DIMM

1) Insert the ROM IDMM into the slot at an angle.
2) Shift down the ROM DIMM.
   - Shift the ROM DIMM in the direction of the arrow until a click is heard. At this time, do not force it.

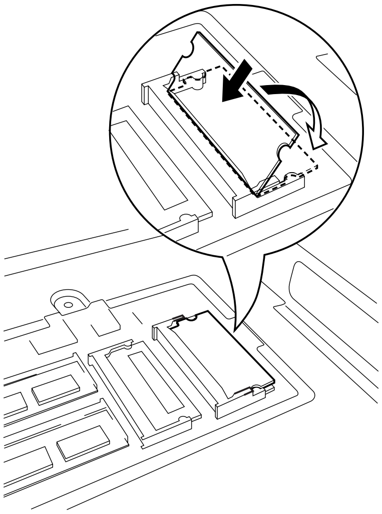


Figure 4-409

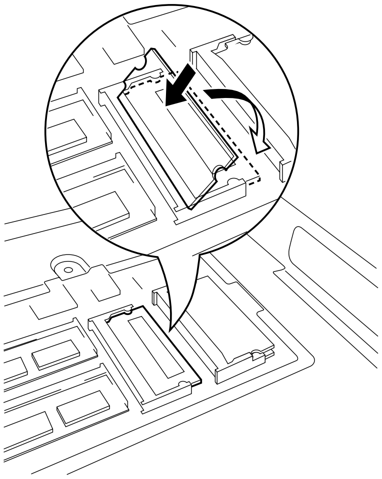


Figure 4-410

3) Mount the covers that have been removed; then, connect the power cord, and turn on the main power switch.

CHAPTER 5

LASER EXPOSURE SYSTEM

I. OUTLINE 5-1
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I. OUTLINE

The laser exposure system consists mainly of the following: the laser unit, which is the source of laser light; the laser scanner motor, which is equipped with a polygon (8-facet) mirror for moving the laser beam; and the BD PCB, which is used to detect the laser beam.

The laser beam generated by the laser unit is directed to the polygon mirror rotating at a specific speed. The laser beam is reflected by the polygon mirror, and then led to the photosensitive drum by way of the laser mirror. (It is also reflected by the BD mirror for detection by the BD PCB.)

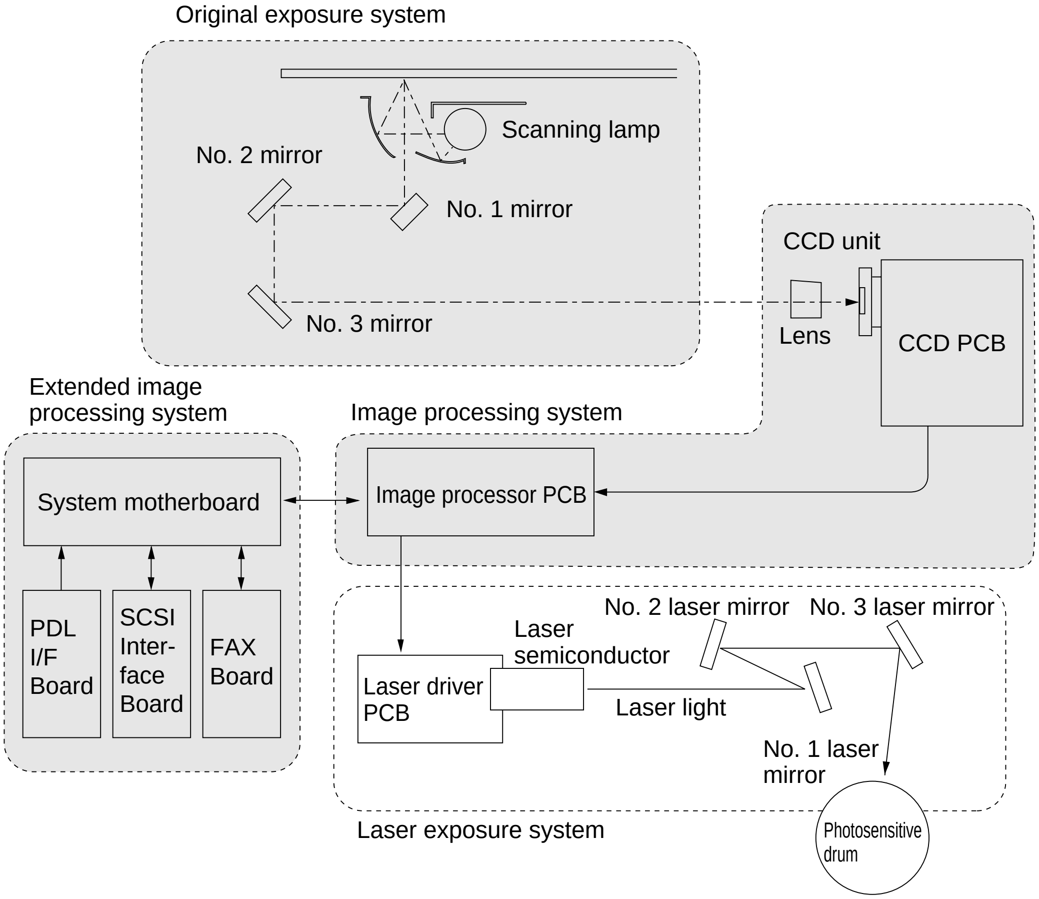
Original exposure system
Scanning lamp
No. 2 mirror
No. 1 mirror
CCD unit
Lens
No. 3 mirror
CCD PCB
Extended image processing system
Image processing system
System motherboard
Image processor PCB
PDL I/F Board
SCSI Inter-face Board
FAX Board
No. 2 laser mirror
No. 3 laser mirror
Laser semiconductor
Laser driver PCB
Laser light
No. 1 laser mirror
Laser exposure system
Photosensitive drum

Figure 5-100

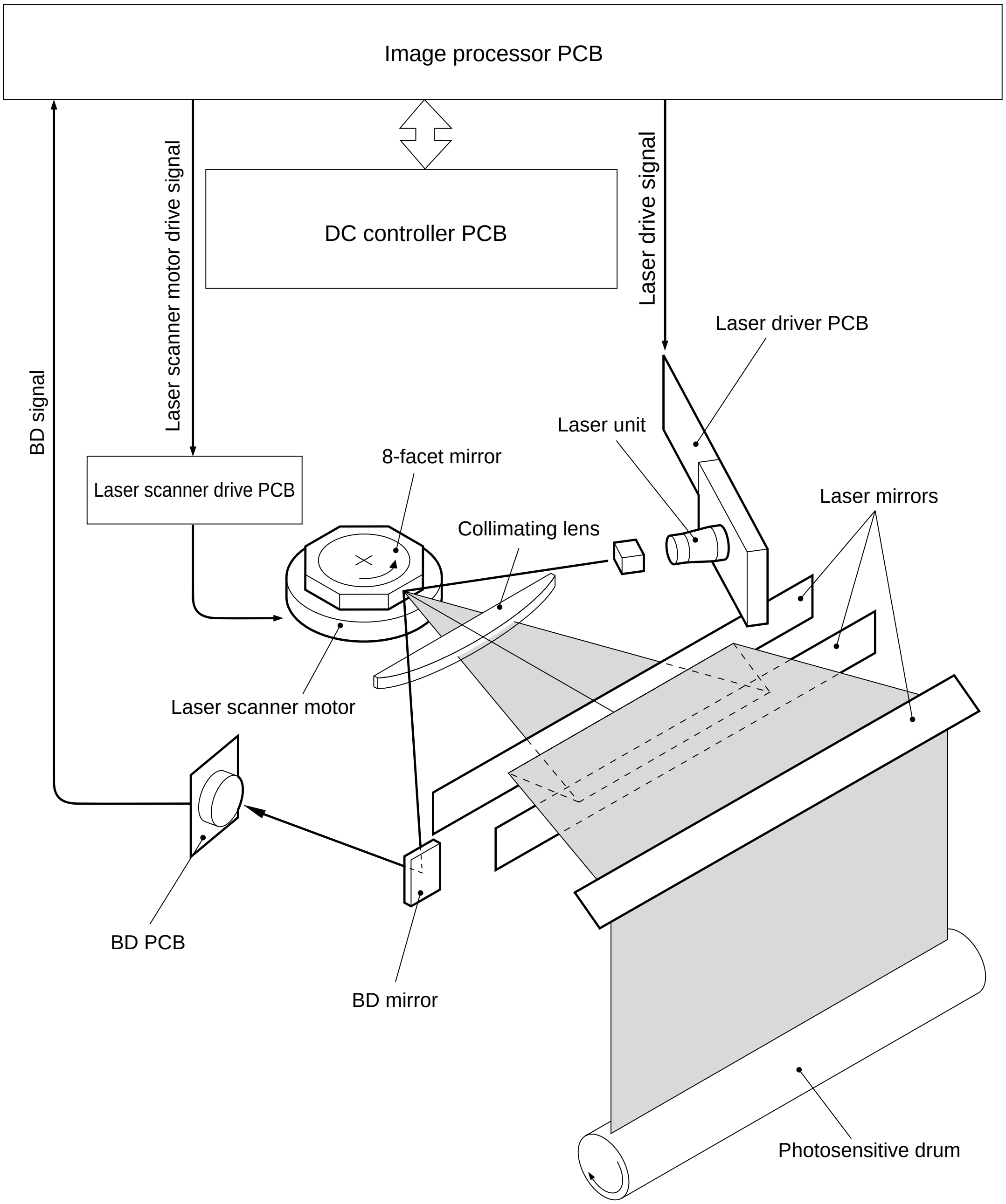
Image processor PCB
Laser scanner motor drive signal
DC controller PCB
Laser drive signal
BD signal
Laser driver PCB
Laser unit
8-facet mirror
Laser scanner drive PCB
Laser mirrors
Collimating lens
Laser scanner motor
BD PCB
BD mirror
Photosensitive drum

Figure 5-101

II. GENERATING THE BD SIGNAL

The laser beam must be led to the photosensitive drum at a specific time, requiring a laser emission start (horizontal sync) signal, and the BD (beam detect) signal is used to generate such a signal.

The machine checks the edge of copy paper being fed after re-pick up (for a double-sided copy) to find out the degree of displacement to the rear/front. It uses the result of measurement to vary the laser emission timing (determined in reference to the BD signal) so as to ensure that a specific image is always in a specific position of copy paper.

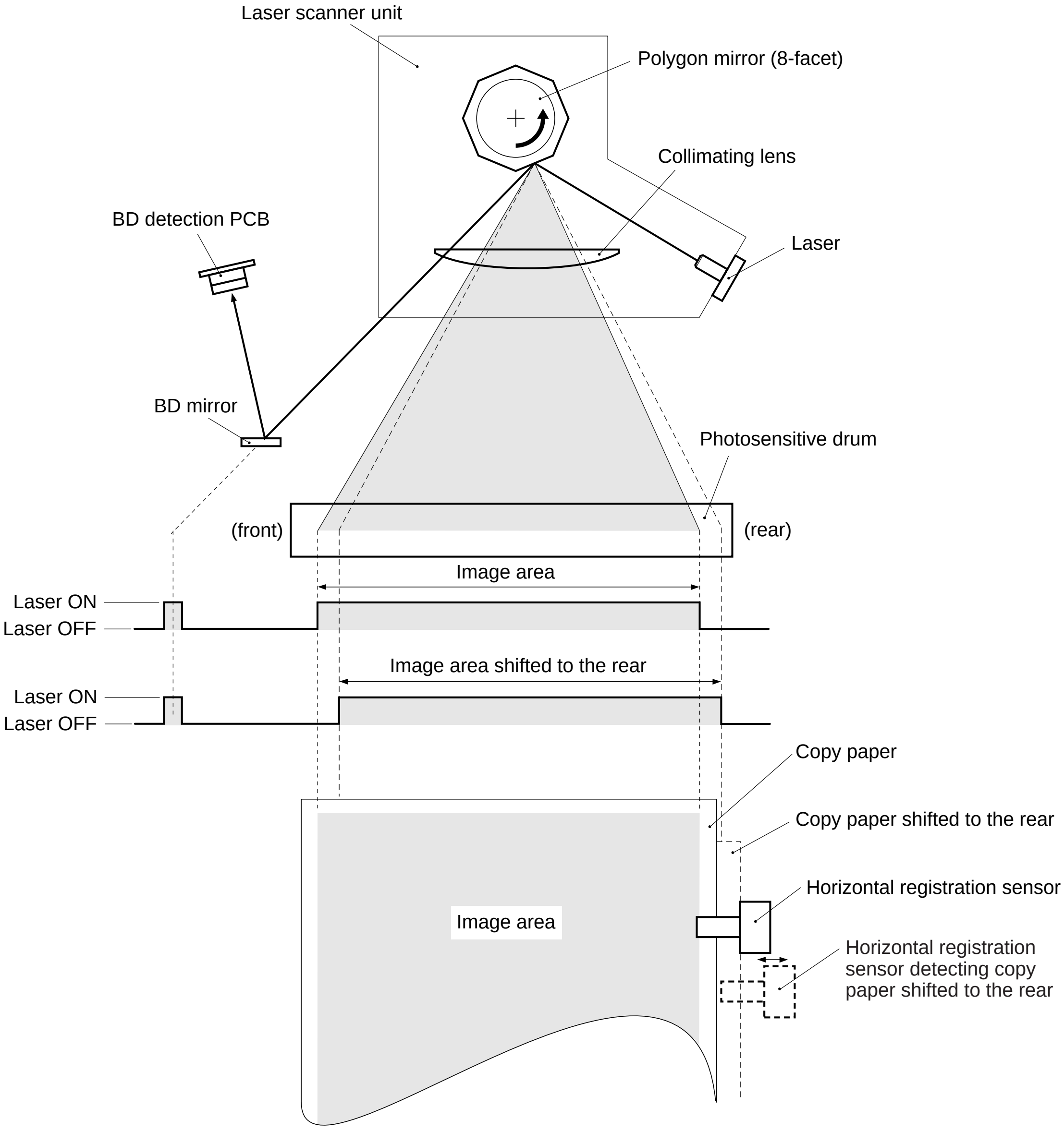
Laser scanner unit
Polygon mirror (8-facet)
Collimating lens
BD detection PCB
Laser
BD mirror
Photosensitive drum
(front)
(rear)
Image area
Laser ON
Laser OFF
Image area shifted to the rear
Laser ON
Laser OFF
Copy paper
Copy paper shifted to the rear
Horizontal registration sensor
Image area
Horizontal registration sensor detecting copy paper shifted to the rear

Figure 5-200

The flow of signals is as shown in Figure 5201. The image processor PCB generates clock signals for synchronized control using the BD signal. The image signals from the CCD is written to the memory for horizontal synchronization, and the image signals are read in conjunction with the clock signals for transfer to the laser driver PCB.

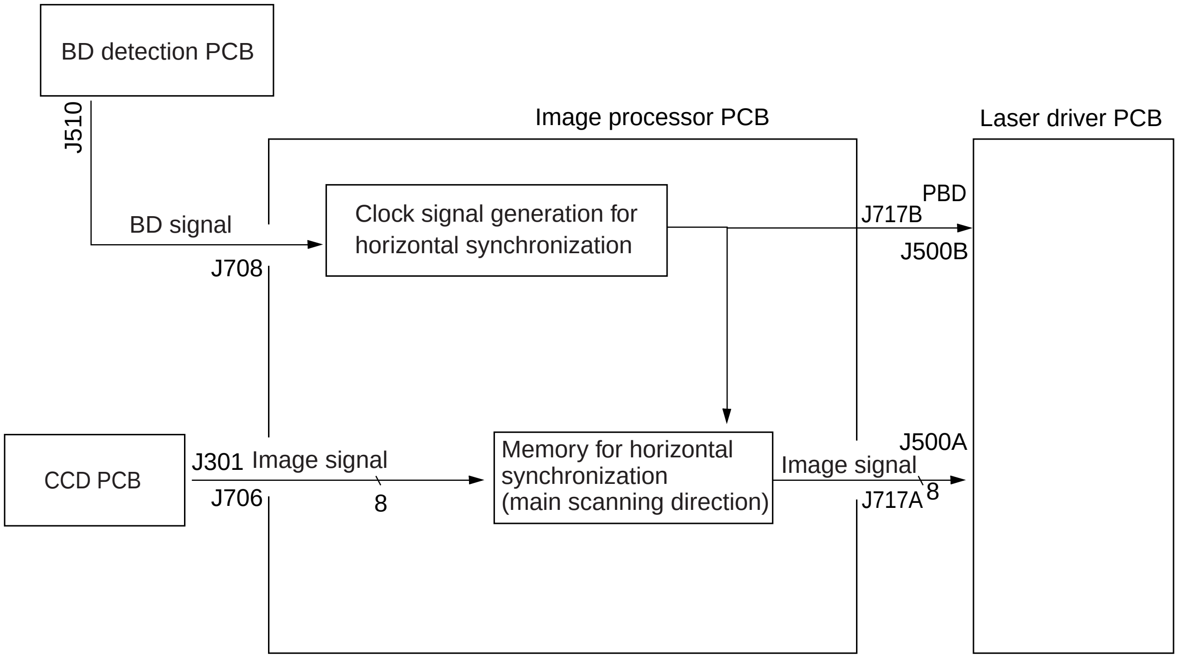
BD detection PCB
J510
Image processor PCB
Laser driver PCB
BD signal
J708
Clock signal generation for horizontal synchronization
PBD
J717B
J500B
CCD PCB
J301
Image signal
J706
8
Memory for horizontal synchronization (main scanning direction)
Image signal
J500A
J717A
8

Figure 5-201

Related Service Mode

E100	• The BD signal is not detected within 2 sec after the laser beam is turned on. (laser emission start signal) • The synchronization of the BD signal has an irregularity.

III. LASER DRIVER PCB

A. Outline

Figure 5-300 shows the laser driver PCB, which drives the laser semiconductor using control signals and the image signals from the image processor PCB. The circuit has the following functions:

1. Driving the laser semiconductor
2. Stabilizing the laser intensity (APC control)
3. Switching laser activation mode
4. Switching laser output

The image signals from the image processor are written in the line memory in conjunction with the sync signals generated for internal use on the laser driver PCB. The laser drive signals are generated based on these image signals to drive the laser semiconductor.

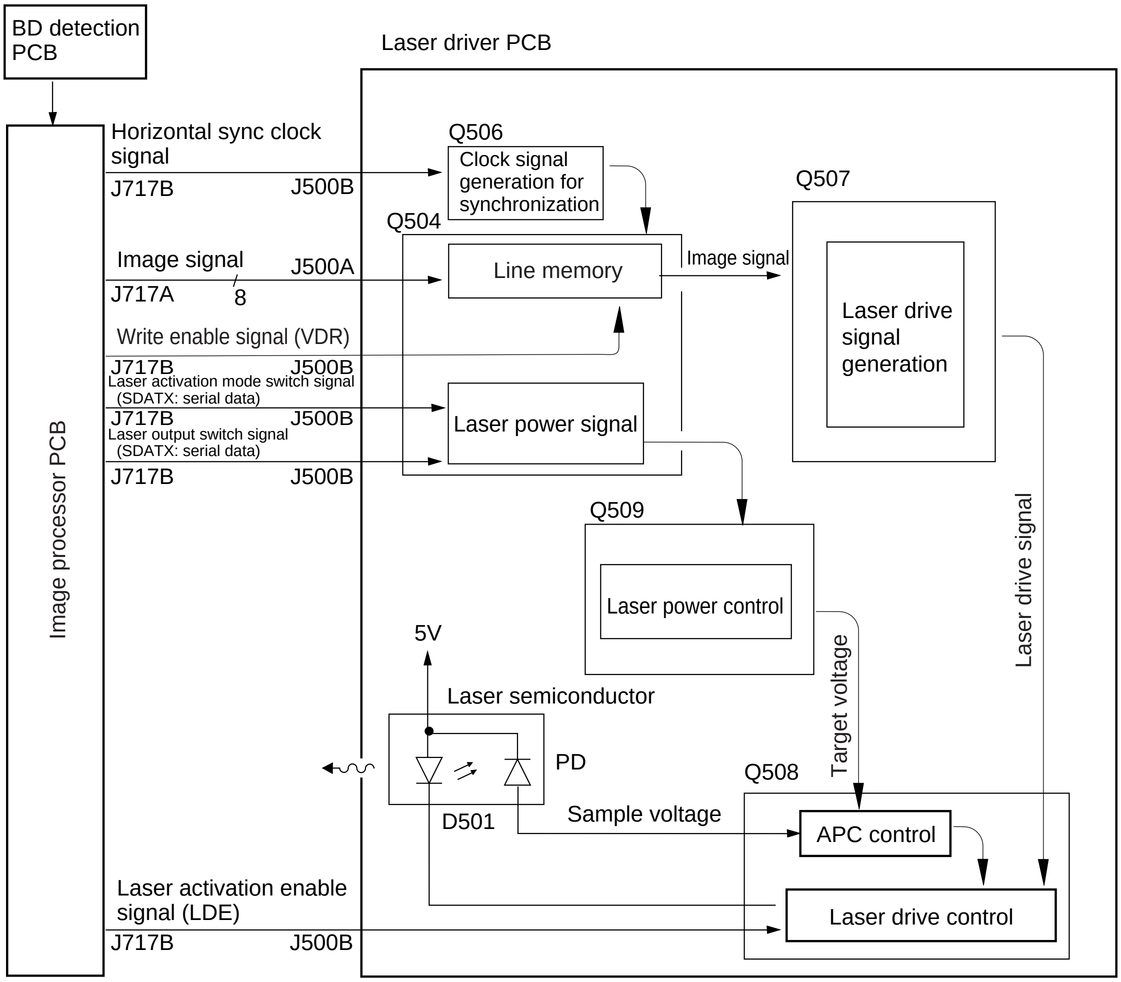
BD detection PCB
Laser driver PCB
Image processor PCB
Horizontal sync clock signal
J717B
J500B
Q506
Clock signal generation for synchronization
Q507
Q504
Image signal
J500A
J717A
8
Line memory
Image signal
Laser drive signal generation
Write enable signal (VDR)
J717B
J500B
Laser activation mode switch signal (SDATX: serial data)
J717B
J500B
Laser output switch signal (SDATX: serial data)
J717B
J500B
Laser power signal
Q509
Laser power control
Laser drive signal
5V
Target voltage
Laser semiconductor
PD
Q508
D501
Sample voltage
APC control
Laser activation enable signal (LDE)
J717B
J500B
Laser drive control

Figure 5-300

B. Stabilizing the Laser Output

The laser output tends to vary appreciably in response to changes in the ambient temperature. The machine controls the mechanism so as to ensure stable output:

The laser beam is emitted.

⇩

The laser beam is detected by the photodiode (PD) built in the laser element.

⇩

The output voltage (sample voltage) of the photodiode is returned to the APC circuit.

⇩

The sample voltage is compared against the target voltage to determine the laser drive current.

The laser beam is monitored (for every line scan), and the drive current is varied on a real time basis to ensure a stable laser beam.

C. Switching the Laser Activation Mode

The laser beam is turned on for control of image signals and, in addition, for detection of BD signals (full activation), selected using the laser activation mode switching signal (serial communication) from the image processor PCB.

D. Switching the Laser Output

The laser output may be either high or low, and control is made so that images appropriate to either mode may be obtained. The output modes are switched by changing the target voltage under APC control in response to the laser output switching signal (serial communication).

These laser outputs are used as shown in Table 5-300:

Laser output	Mode
Low	When low density is selected for memory copying.
High	Other than above.

Table 5-300

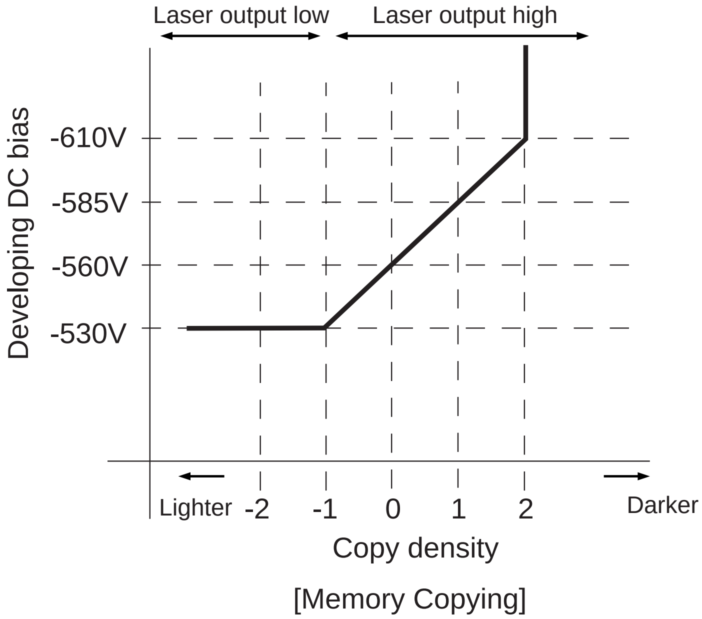

Figure 5-301

IV. CONTROLLING THE LASER SCANNER MOTOR

A. Outline of Operations

The laser scanner motor (M4) is driven by the drive signal (M4D*) from the image processor PCB. When the rotation speed of the motor deviates from a specific value, the motor clock signal goes '1'.

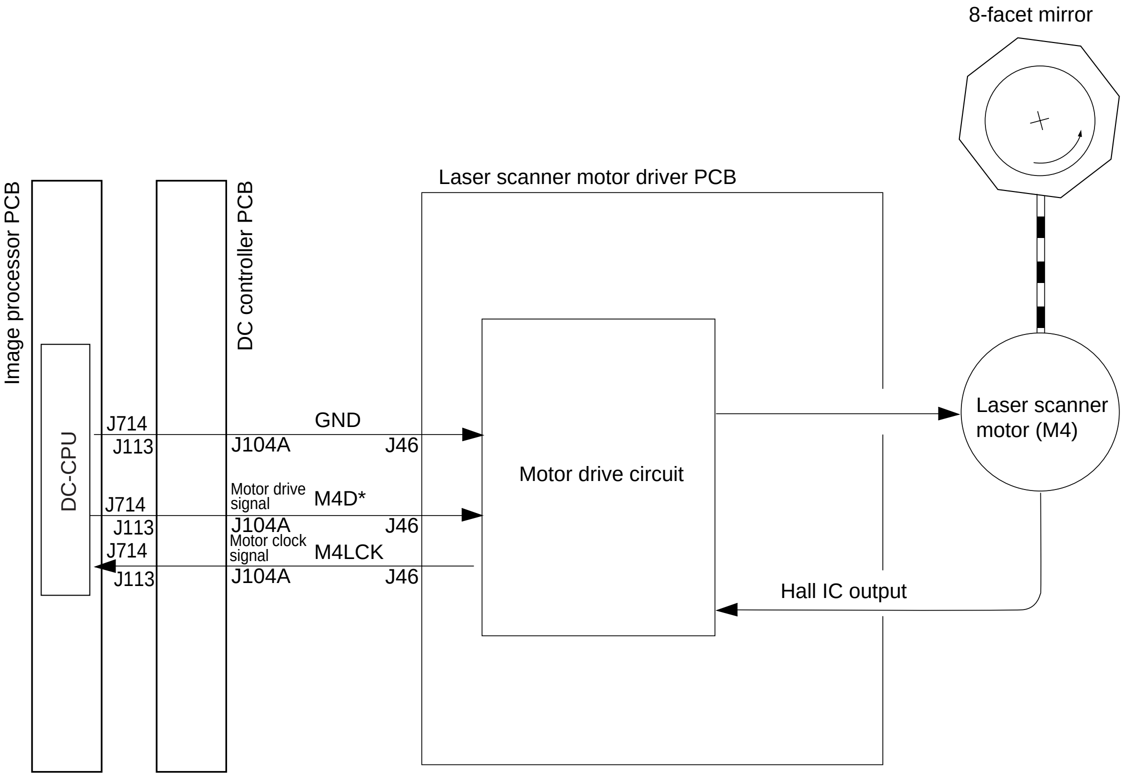
8-facet mirror
Laser scanner motor driver PCB
Image processor PCB
DC controller PCB
DC-CPU
J714
J113
GND
J104A
J46
Motor drive signal
M4D*
Motor clock signal
M4LCK
Motor drive circuit
Laser scanner motor (M4)
Hall IC output

Figure 5-400

Related Error Code

E110	The motor clock signal (M4LCK) was generated.

B. Turning On and Off the Laser Scanner Motor

a. Turning On the Laser Scanner Motor

The laser scanner motor (M3) starts to rotate at the following timing ([A] of Figure 5-401):

[1] The key is pressed.
[2] The copyboard cover or the feeder is opened.
[3] An original is placed in the feeder.

b. Turning Off the Laser Scanner Motor

The laser scanner motor turns off when the period of time selected in "silent mode" in user mode expires. The period represents the time between the end of LSTR and the time when the laser scanner turns off ([B] of Figure 5-401).

0: 8 sec
1 to 9: 1 to 9 min

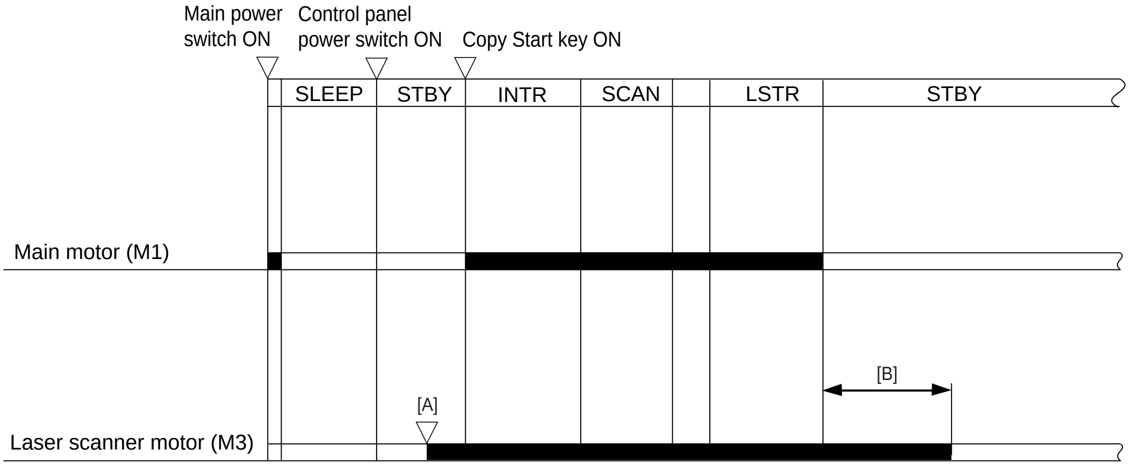
Main power switch ON
Control panel power switch ON
Copy Start key ON
SLEEP
STBY
INTR
SCAN
LSTR
STBY
Main motor (M1)
[B]
[A]
Laser scanner motor (M3)

Figure 5-401

[B]: May be changed in user mode (silent mod); between 0 and 9; if set to 0, the period will be omitted.

V. DISASSEMBLY/ASSEMBLY

⚠ Be sure to observe the following when disassembling/assembling the parts:

1. The power plug must be disconnected before starting the work.
2. The steps used to disassemble the parts must be reversed when assembling them, unless otherwise noted.
3. The screws must be identified by type (length, diameter) and location.
4. The washer used with a specific mounting screw (e.g., for grounding wire and varistor) must not be left out to ensure electric conductivity.
5. The screws that are paint-locked in place must not be removed during disassembly work.
6. The machine must not be operated with any of its parts removed, unless otherwise required.

A. Laser Scanner Assembly

1. Removing the Laser Scanner Unit/ Laser Unit

1) Remove the copyboard glass.
2) Remove the CCD unit cover, IP cover, and IP PCB.
3) Remove the five screws [2], and detach the laser scanner unit cover [1].

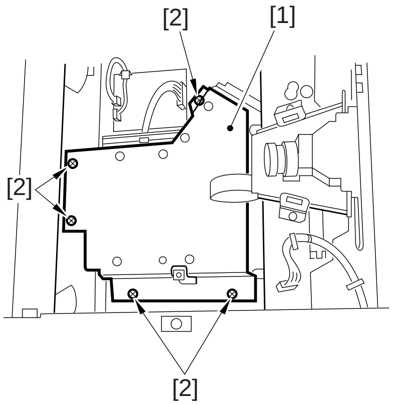

Figure 5-500

4) Remove the four screws [4], and disconnect the three connectors [5]; and detach the laser scanner unit [3].

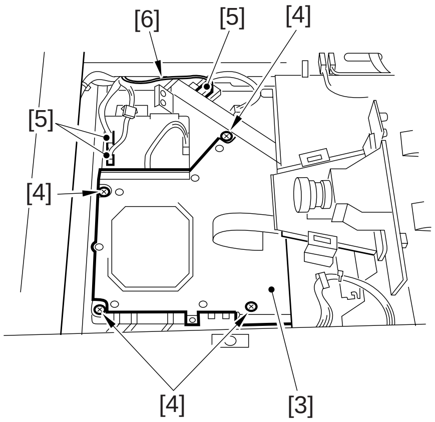

Figure 5-501

Caution:
After mounting the laser scanner unit, check to make sure that the harness [6] is not trapped by the IP PCB.

5) Remove the two screws [8], and detach the laser unit [7].

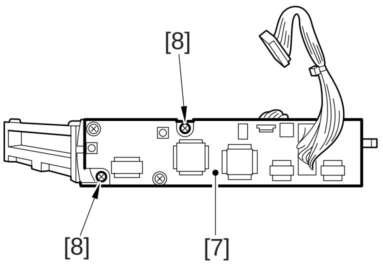

Figure 5-502

CHAPTER 6

IMAGE FORMATION SYSTEM

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  B. Sequence of Operations 6-2
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  D. Controlling the Transfer Charging Roller Bias 6-8
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I. OUTLINE OF IMAGE FORMATION PROCESS

A. Outline

Figure 6-100 shows the construction of the image formation system. Each high-voltage mechanism is controlled by the high-voltage transformer circuit on the composite power supply PCB based on the control signals from the image processor PCB for the following items:

- Primary charging roller bias
- Transfer charging roller bias
- Separation static eliminator constant current
- Developing bias
- Transfer guide bias
- Upper fixing roller bias (See Chapter 9 "Fixing System.")

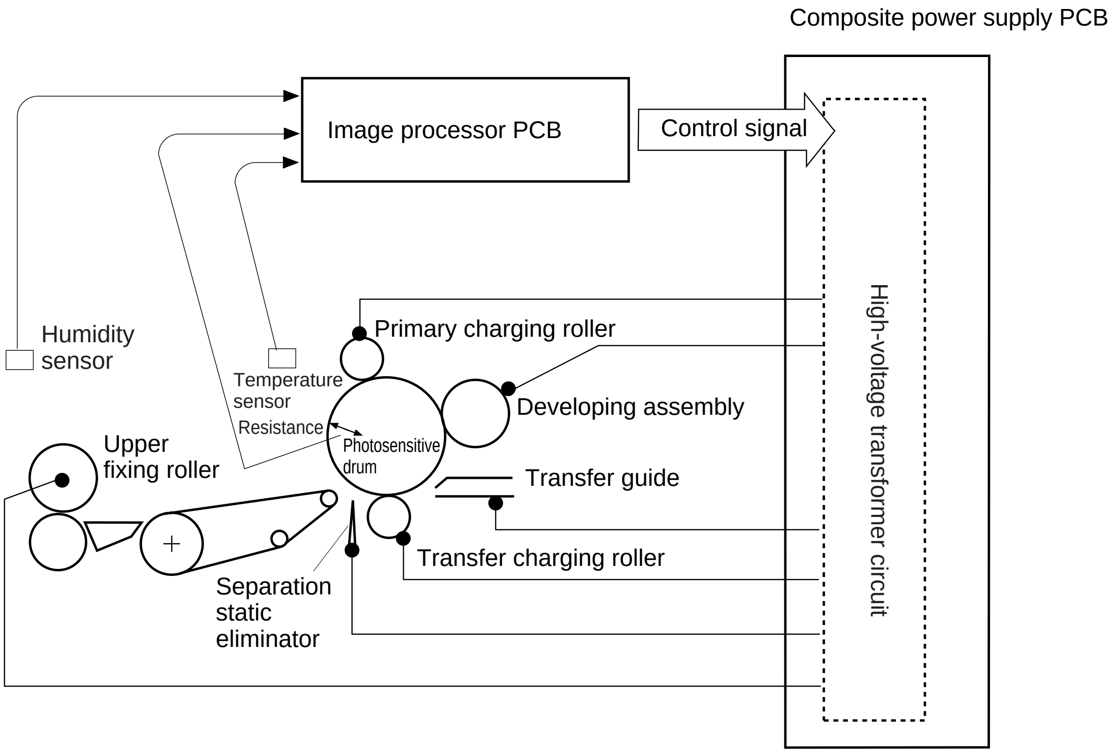

Composite power supply PCB
Image processor PCB
Control signal
High-voltage transformer circuit
Humidity sensor
Temperature sensor
Resistance
Photosensitive drum
Primary charging roller
Developing assembly
Transfer guide
Transfer charging roller
Upper fixing roller
Separation static eliminator

Figure 6-100

B. Sequence of Operations

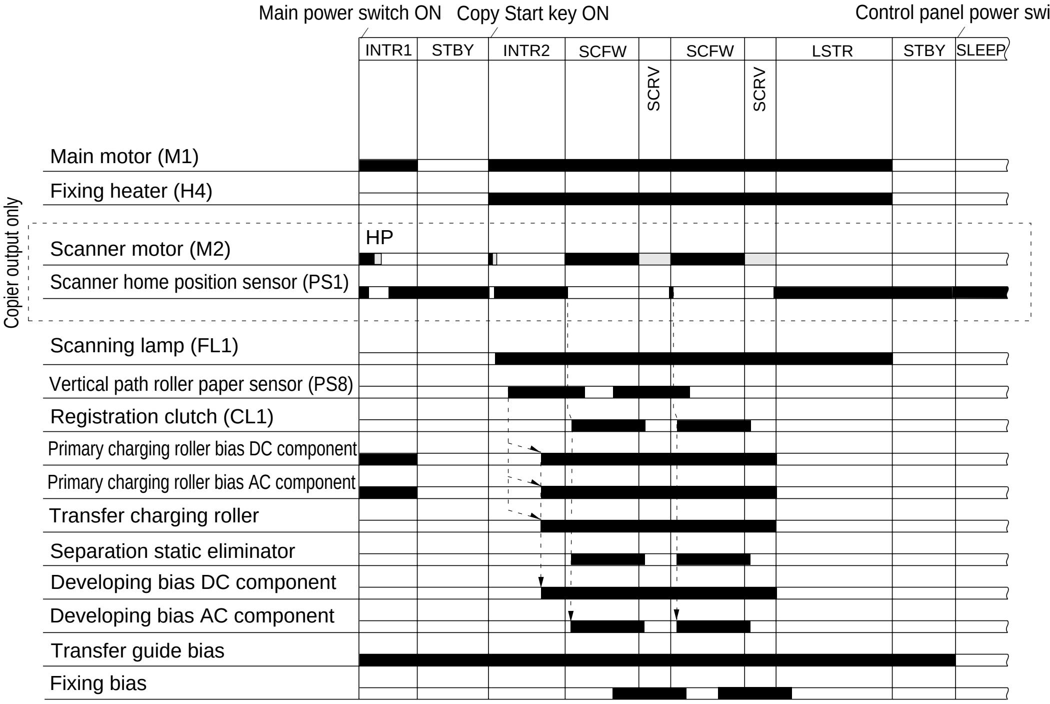

Main power switch ON
Copy Start key ON
Control panel power switch OFF
INTR1
STBY
INTR2
SCFW
SCRV
SCFW
SCRV
LSTR
STBY
SLEEP
Copier output only
Main motor (M1)
Fixing heater (H4)
HP
Scanner motor (M2)
Scanner home position sensor (PS1)
Scanning lamp (FL1)
Vertical path roller paper sensor (PS8)
Registration clutch (CL1)
Primary charging roller bias DC component
Primary charging roller bias AC component
Transfer charging roller
Separation static eliminator
Developing bias DC component
Developing bias AC component
Transfer guide bias
Fixing bias

Figure 6-101

- In direct copying, the scanner home position sensor (PS1) triggers the registration clutch (CL1) to move copy paper.
- In memory copying, the scanner and the image formation system do not operate in conjunction; as such, the vertical path roller paper sensor (PS8) is used to trigger the registration clutch (CL1).

C. Controlling the Primary Charging Roller Bias

1. Outline

The machine uses a charging roller for direct charging. In addition to the DC bias, and AC bias is applied to the primary charging roller to ensure stable charging. The control items include the following:

- DC bias constant voltage
- AC bias constant current
- Application voltage level correction (APVC control)
- AC bias by environment (humidity) sensor and software counter reading
- DC bias by temperature sensor and software counter reading

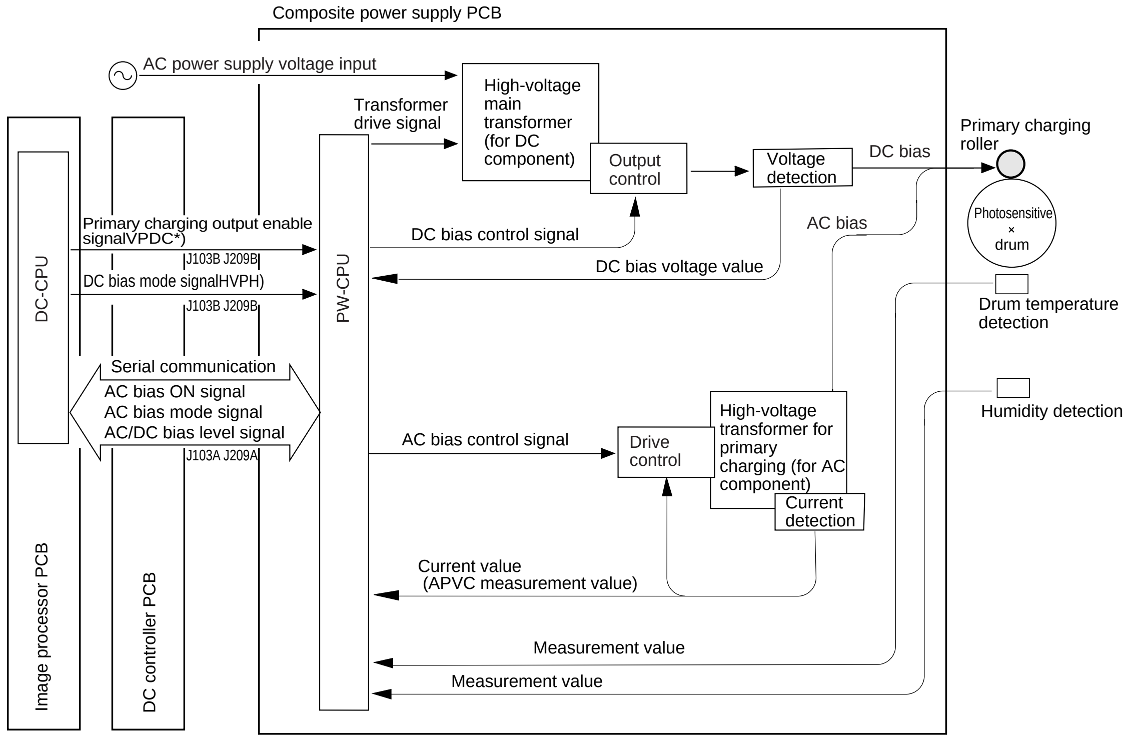
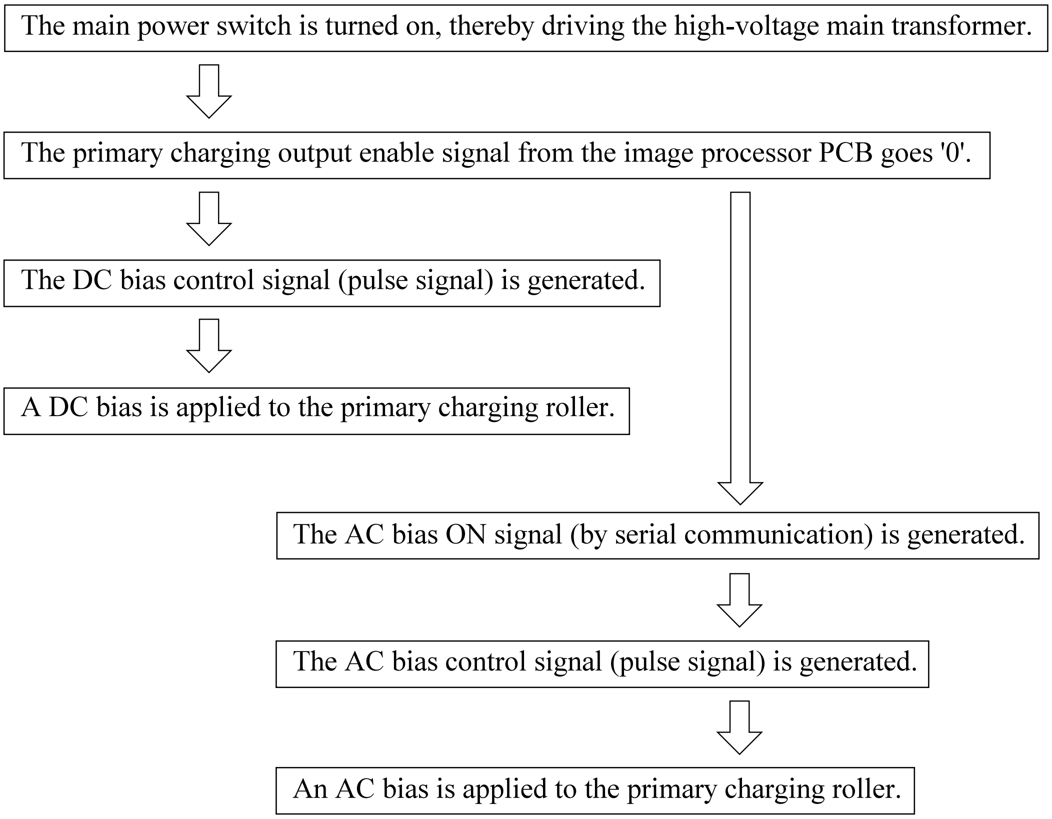

Composite power supply PCB
AC power supply voltage input
High-voltage main transformer (for DC component)
Transformer drive signal
Output control
Voltage detection
DC bias
Primary charging roller
Photosensitive drum
AC bias
Primary charging output enable signalVPDC*)
J103B J209B
DC bias mode signalHVPH)
J103B J209B
DC bias control signal
DC bias voltage value
DC-CPU
PW-CPU
Drum temperature detection
Humidity detection
Serial communication
AC bias ON signal
AC bias mode signal
AC/DC bias level signal
J103A J209A
AC bias control signal
Drive control
High-voltage transformer for primary charging (for AC component)
Current detection
Current value
(APVC measurement value)
Measurement value
Measurement value
Image processor PCB
DC controller PCB

Figure 6-102

2. Turning On and Off the Primary Charging Bias



The main power switch is turned on, thereby driving the high-voltage main transformer.

The primary charging output enable signal from the image processor PCB goes '0'.

The DC bias control signal (pulse signal) is generated.

A DC bias is applied to the primary charging roller.

The AC bias ON signal (by serial communication) is generated.

The AC bias control signal (pulse signal) is generated.

An AC bias is applied to the primary charging roller.

3. Controlling the Primary Charging Roller (constant voltage/current)

The DC and AC bias outputs applied to the primary charging roller are controlled by the DC bias control signal and the AC bias control signal from the PW-CPU as follows:

The output voltage of the DC bias is returned to the PW-CPU.

⇩

The DC control signal is varied in response to the return voltage.

⇩

The DC bias assumes a constant voltage (constant voltage control).

The current for the AC bias output is taken into the drive control circuit.

⇩

The AC bias current is compared against the reference value, and the AC control signal is varied as necessary to drive the transformer.

⇩

The AC bias will assume a constant current (constant current control).

4. Correcting the DC Bias Temperature

As the temperature inside the machine increases, the resistance of the photosensitive drum drops to decrease charging characteristics. To ensure stable potential, the DC bias is corrected according to changes in temperature. The temperature inside the machine is monitored by the thermistor mounted on the rear side plate, and the absolute value of the DC bias is increased when increases are noted in the temperature reading.

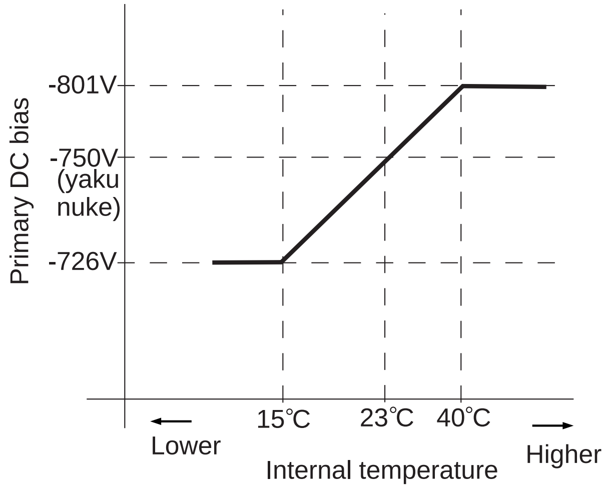


Figure 6-103

5. Correcting the AC Bias Humidity

The AC bias output characteristics change according to the humidity around the photosensitive drum. In a low-humidity environment, the charging efficiency drops to cause uneven charging, requiring maintenance of the current at a higher level. The AC bias is varied as shown in Figure 6-104 according to the reading of the humidity sensor. Over time, the resistance of the drum surface drops to allow more current; the current is decreased in such cases.

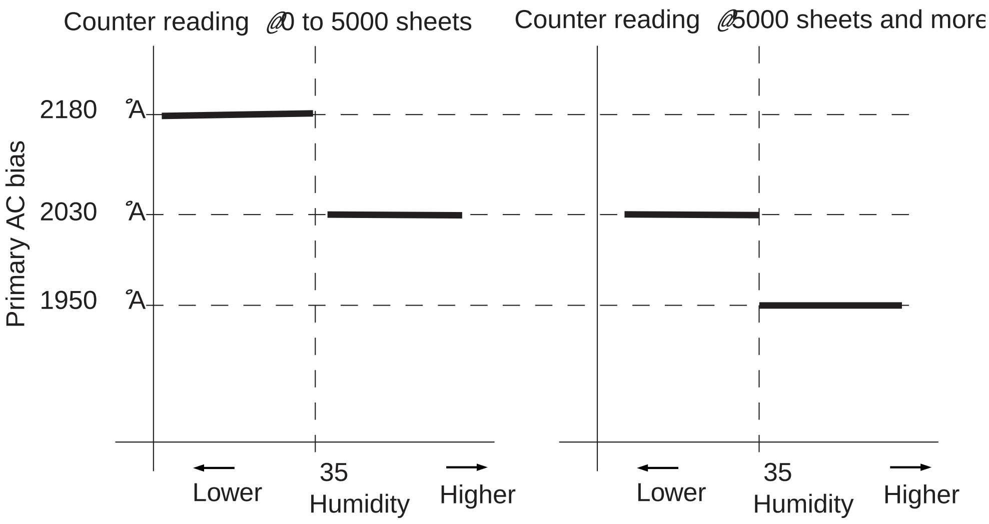


Figure 6-104

6. Correcting the Application Voltage Level (APVC control)

The primary charging efficiency varies according to changes in the site environment (temperature, humidity) and deterioration of the charging roller. A reference current is applied when the main power switch is turned on to find out the degree of voltage output for correction a follows:

A reference voltage is applied during initial rotation after main power switch is turned on.

⇩

The current output is measured, and communicated to the PW-CPU of the composite power supply PCB.

⇩

The PW-CPU computes the optimum application voltage.

⇩

Primary charging is initiated using the optimum application voltage.

7. Controlling the Output Mode

To prevent stray toner in non-image areas in continuous copying, both AC bias and DC bias outputs are varied between image areas and non-image areas.

Related Service Mode

ADJUST>HV-PR1>P-DC	DC bias output for image areas.
ADJUST>HV-PR1>P-NO-DC	DC bias output for non-image areas.
ADJUST>HV-PR1>P-AC	AC bias output for image areas.
ADJUST>HV-PR1>P-NO-AC	AC bias output for non-image areas.

Be sure to enter the value indicated on the service label if you have replaced the image processor PCB or initialized the RAM.

D. Controlling the Transfer Charging Roller Bias

1. Outline

The machine uses a charging roller for direct transfer. A DC bias is applied to the transfer charging roller, and the mechanism is controlled for the following:

- DC bias constant voltage/constant current
- Application voltage level (correction; ATVC control)
- Output by operation mode
- Output by humidity sensor reading

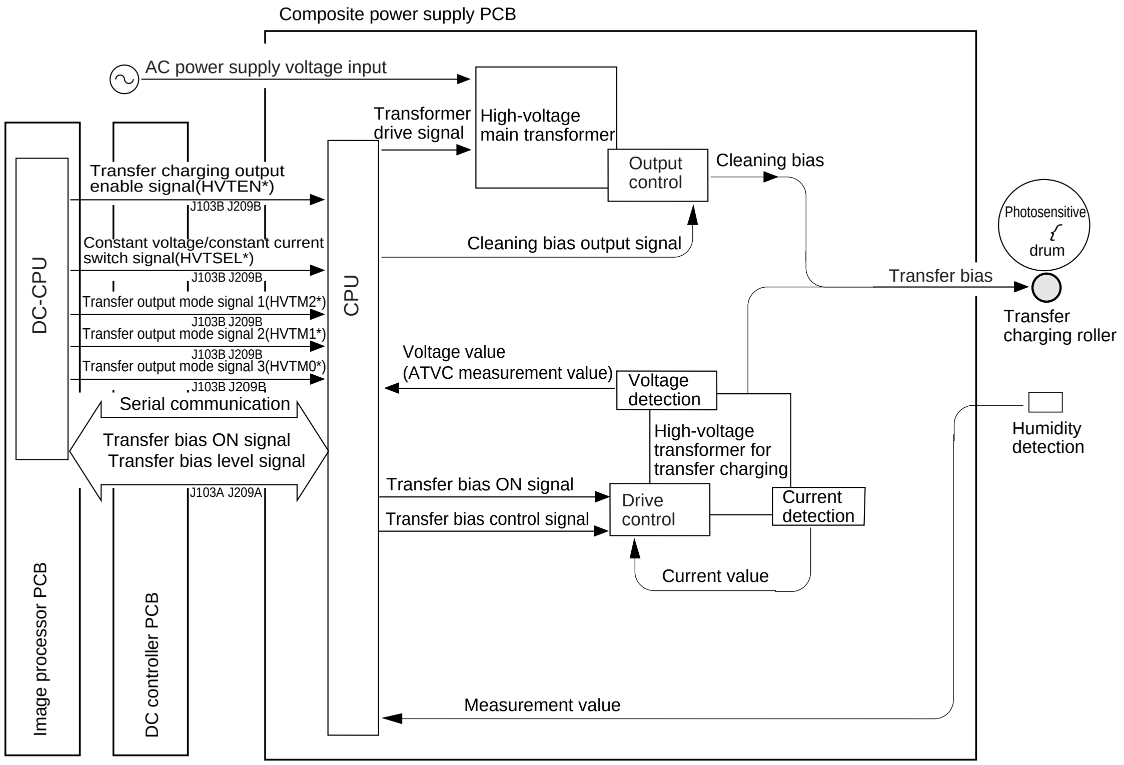

Composite power supply PCB
AC power supply voltage input
Transformer drive signal
High-voltage main transformer
Output control
Cleaning bias
Photosensitive drum
Transfer charging output enable signal(HVTEN*)
J103B J209B
Constant voltage/constant current switch signal(HVTSEL*)
J103B J209B
Transfer output mode signal 1(HVTM2*)
J103B J209B
Transfer output mode signal 2(HVTM1*)
J103B J209B
Transfer output mode signal 3(HVTM0*)
J103B J209B
Serial communication
Transfer bias ON signal
Transfer bias level signal
J103A J209A
DC-CPU
CPU
Cleaning bias output signal
Transfer bias
Transfer charging roller
Voltage value (ATVC measurement value)
Voltage detection
High-voltage transformer for transfer charging
Humidity detection
Transfer bias ON signal
Transfer bias control signal
Drive control
Current detection
Current value
Measurement value
Image processor PCB
DC controller PCB

Figure 6-105

2. Turning ON and Off the Transfer Charging Roller Bias

The transfer charging roller bias is turned on and off as follows:

The main power switch is turned, and the high-voltage main transformer is driven.

⇩

The transfer charging output enable signal from the image processor PCB goes '0'.

⇩

The transfer bias ON signal arrives from the image processor PCB (by serial communication).

⇩

The transfer bias control signal (pulse signal) is generated.

⇩

A DC bias is applied to the transfer charging roller.

3. Controlling the Output

The DC bias output applied to the transfer charging roller is controlled as follows:

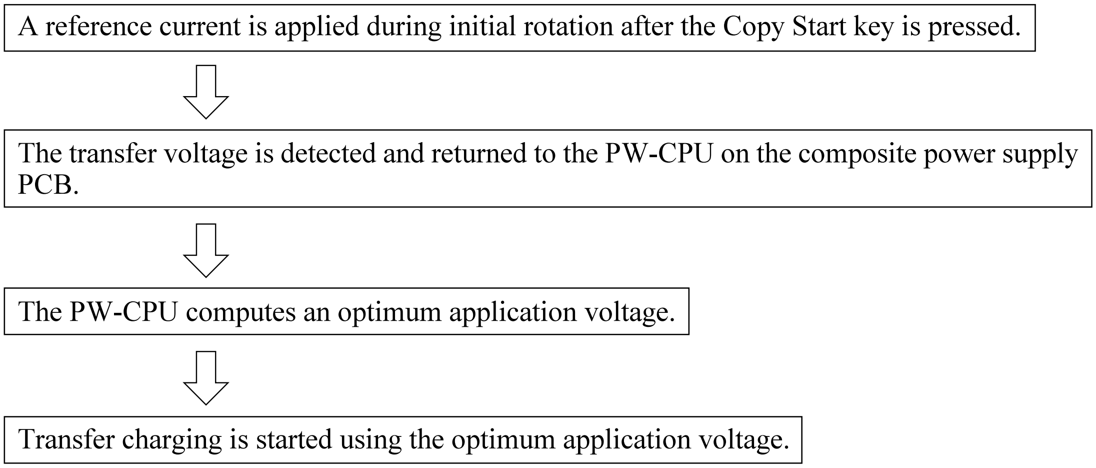
The "optimum" transfer bias level differs depending on paper size and the environment, and the IP-CPU execute automatic control of the output level to suit the selected paper size and the environment.

Related Service Mode

OPTION>BODY>**TRANS-SW**	If transfer faults occur when using large-size paper, change the control mode as follows: 0: auto control mode (default) 1: manual control mode If set to '1', set details under ADJUST>HV-TR>**TR-N1, N2.**

4. Correcting the Application Voltage Level (ATVC control)

The transfer charging efficiency varied according to changes in humidity or deterioration of the transfer roller. A reference current is applied each time the Copy Start key is pressed to measure the degree of voltage output for correction as follows:



A reference current is applied during initial rotation after the Copy Start key is pressed.

⇩

The transfer voltage is detected and returned to the PW-CPU on the composite power supply PCB.

⇩

The PW-CPU computes an optimum application voltage.

⇩

Transfer charging is started using the optimum application voltage.

5. Controlling the Output Mode

a. Types of Modes

The transfer charging output takes the following output modes, each with a different output and switched based on the combination of transfer output mode signals from the image processor PCB. See Figure 6-107 for the timing of application.

- Image Transfer Bias
  This bias is used to transfer toner form the photosensitive drum to copy paper, and is positive in polarity.
- Cleaning Bias
  This bias is applied at the following timing to return the toner adhering to the transfer charging roller for some reason back to the photosensitive drum, and is negative in polarity.
  - During initial rotation after the Copy Start key is pressed
  - During last rotation
  - During initial rotation after error correction made in response to jam removal
  - During roller cleaning operation in user mode ("adjust/clean"; this is accompanied by cleaning of the primary charging roller)
- Reference Bias
  This bias is used to correct the application voltage level (ATVC control). It is applied each time the Copy Start key is pressed, thereby correcting the voltage level.
- Sheet-to-Sheet Bias
  This bias has a low level so as to prevent adhesion of toner to the transfer charging roller in non-image areas in continuous copying mode.

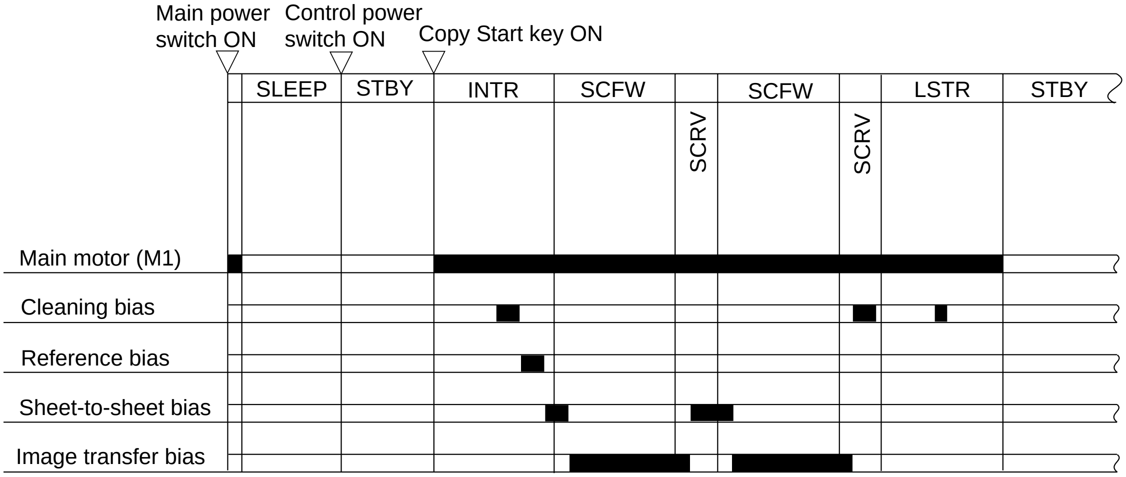

Main power switch ON
Control power switch ON
Copy Start key ON
SLEEP
STBY
INTR
SCFW
SCRV
SCFW
SCRV
LSTR
STBY
Main motor (M1)
Cleaning bias
Reference bias
Sheet-to-sheet bias
Image transfer bias

Figure 6-106

b. Turning On and Off the Cleaning Bias

When the cleaning bias output signal of the composite power supply PCB goes '1', the output from the main transformer is applied to the transfer charging roller.

E. Controlling the Separation Static Eliminator Bias

1. Outline

The machine uses a static eliminator for separation, and a DC bias is applied to the static eliminator. The mechanism is subjected to the following:

- On/off control
- Constant voltage control
- Output control by paper type

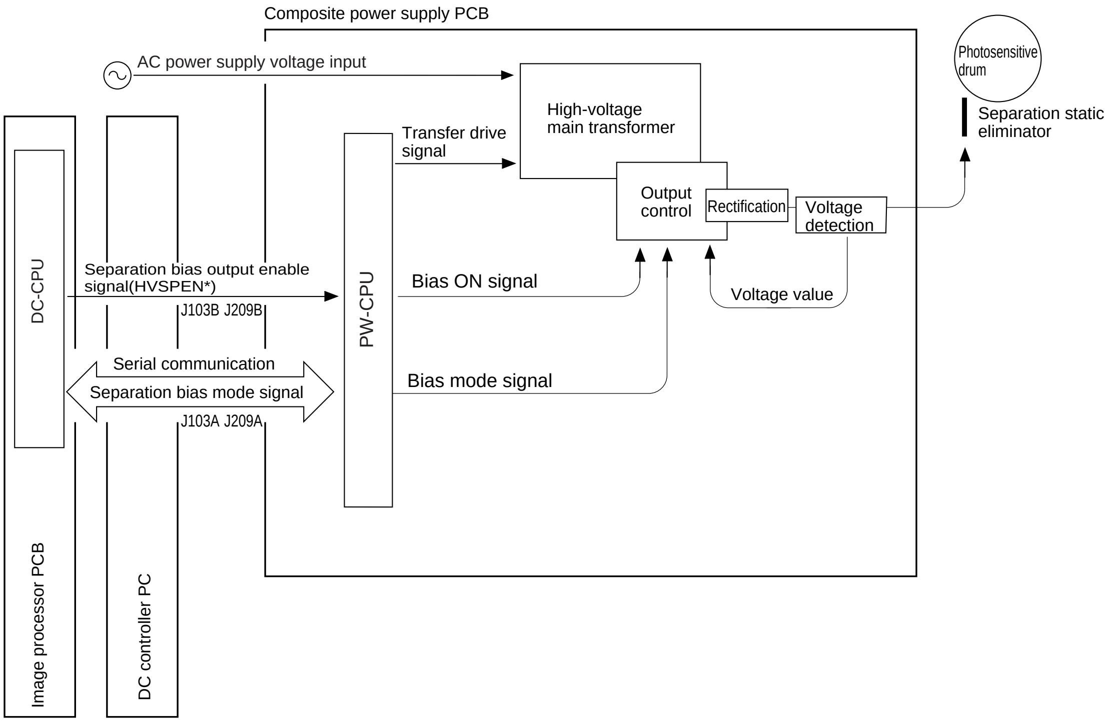

Composite power supply PCB
AC power supply voltage input
Photosensitive drum
Separation static eliminator
High-voltage main transformer
Transfer drive signal
Output control
Rectification
Voltage detection
DC-CPU
Separation bias output enable signal(HVSPEN*)
J103B J209B
PW-CPU
Bias ON signal
Voltage value
Serial communication
Separation bias mode signal
J103A J209A
Bias mode signal
Image processor PCB
DC controller PC

Figure 6-107

2. Turning On and Off the Separation Static Eliminator

The separation static eliminator bias is turned on and off as follows:

The separation bias enable signal from the image processor PCB goes '0'.

⇩

The bias ON signal is generated by the PW-CPU on the composite power supply PCB.

⇩

The output from the high-voltage main transformer is applied to the separation static eliminator.

3. Constant Voltage Control

The bias output is returned to the output control circuit to maintain a specific voltage.

4. Controlling the Output According to Paper Type

Paper with poor separation characteristics (e.g., thin paper) tends to cause separation faults. To ensure proper separation, the application voltage is increased from the normal -2.3 kV to -3.0 kV.

The selection of an application voltage is made by the separation bias mode signal (serial communication) from the image processor PCB.

Related Service Mode

OPTION>BODY>**THIN-SP**	The voltage applied to the separation static eliminator is increased when thin paper mode is selected. 0: Does not change the application voltage. (default) 1: Changes the application voltage to -3.0 kV when thin paper mode is selected.

F. Controlling the Transfer Guide

1. Transfer Guide Bias

The transfer guide bias is used to prevent adhesion of toner to the transfer guide, and is negative in polarity (-400 VDC; toner is also charged to negative polarity).

The transfer guide bias is applied as soon as the control panel power switch is turned on, and continued until power is removed.

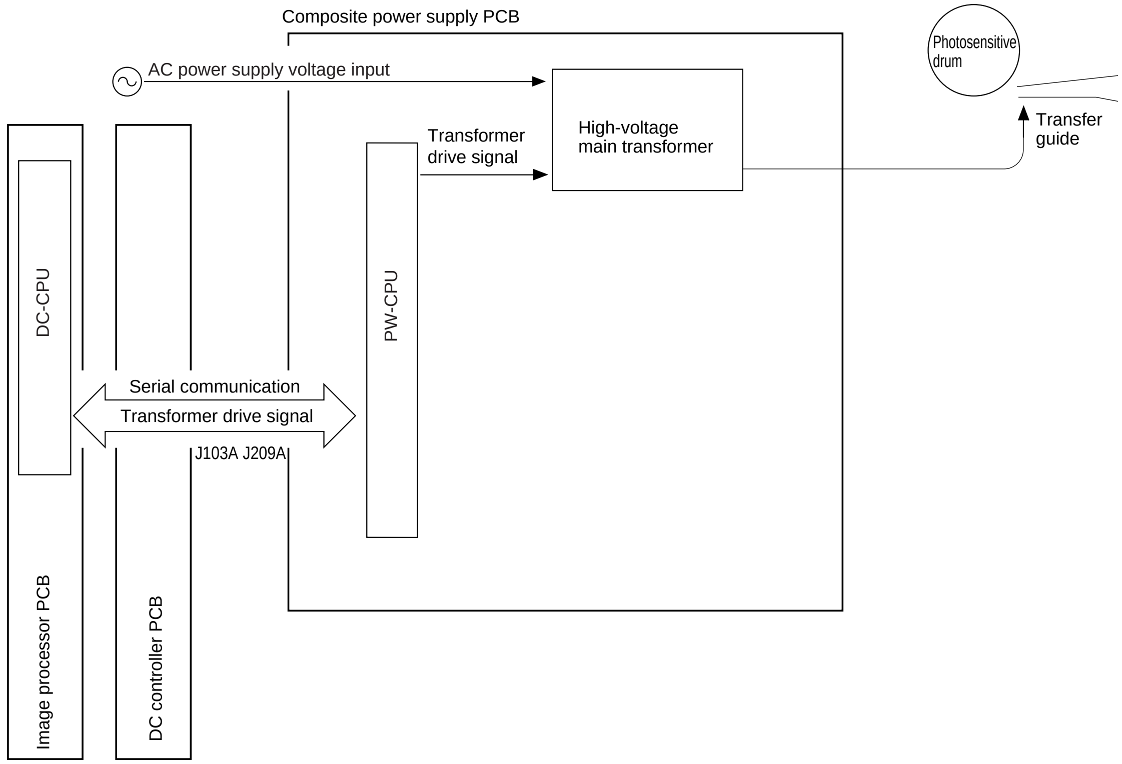

Composite power supply PCB
AC power supply voltage input
Photosensitive drum
Transfer guide
High-voltage main transformer
Transformer drive signal
DC-CPU
PW-CPU
Serial communication
Transformer drive signal
J103A
J209A
Image processor PCB
DC controller PCB

Figure 6-108

G. Primary Charging Roller Cleaning Mechanism

1. Outline

The machine is equipped with a mechanism which automatically cleans the primary charging roller.

The primary charging roller is cleaned by turning on the primary charging roller cleaning solenoid (SL4), thereby butting the cleaning pad against the primary charging roller and, at the same time, moving it across the length of the roller.

Cleaning is performed for the following:

- When making 50 or more copies in continuous mode, during last rotation at the end of the copying operation.
- When making less than 50 copies, during last rotation when the cumulative number of copies has reached 500.
- When roller cleaning is executed under "adjust/clean" in user mode. (In this case, cleaning is performed while applying a cleaning bias to the transfer charging roller.)

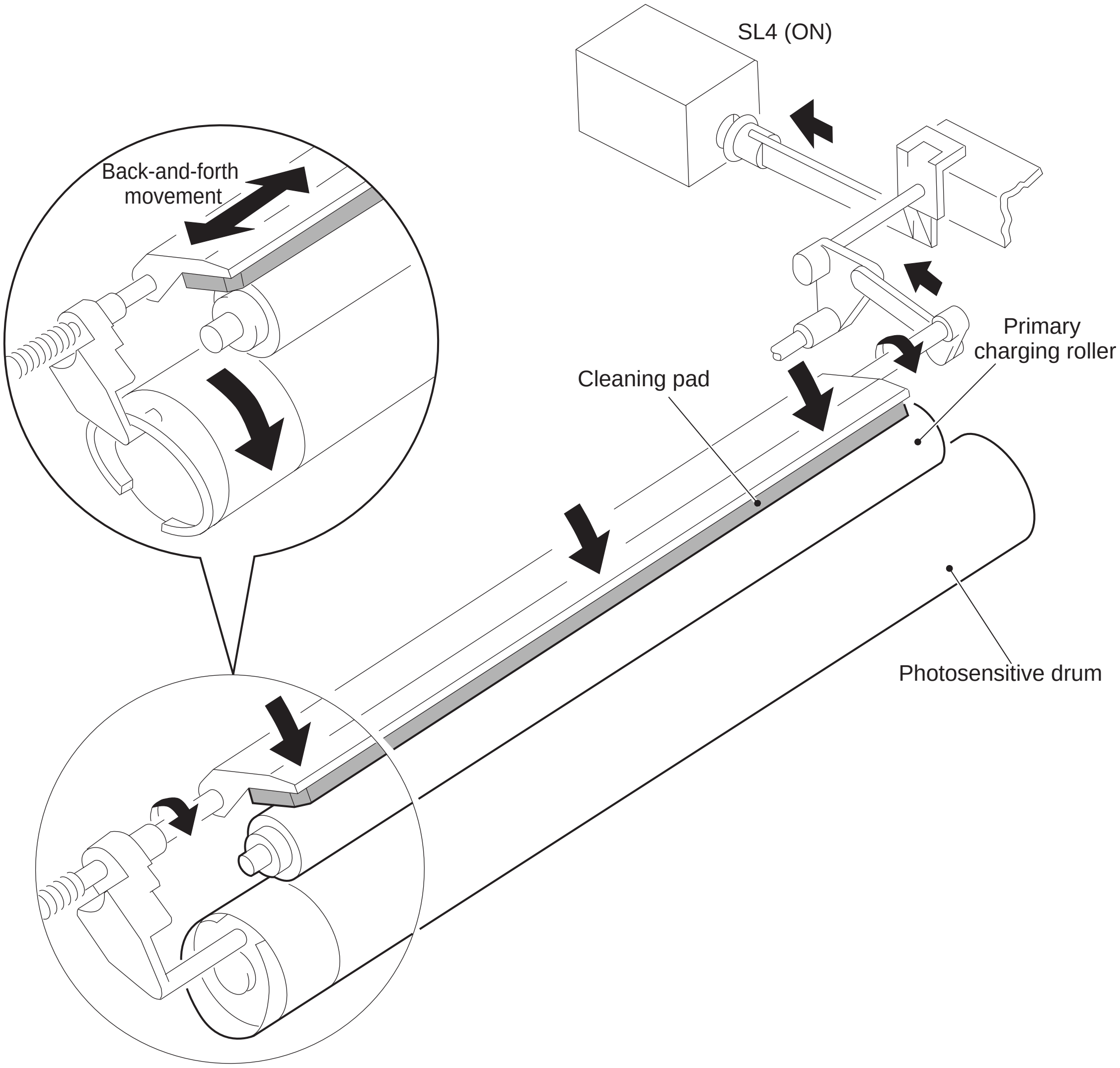


Figure 6-109

II. DEVELOPING ASSEMBLY

A. Outline

The developing assembly consists of the developing cylinder, toner sensor (TS1), and toner stirring rod. The developing assembly is locked in position manually by operting the locking lever together with the developing assembly rail.

The developing cylinder and the toner rod are rotated by the drive of the main motor (M1).

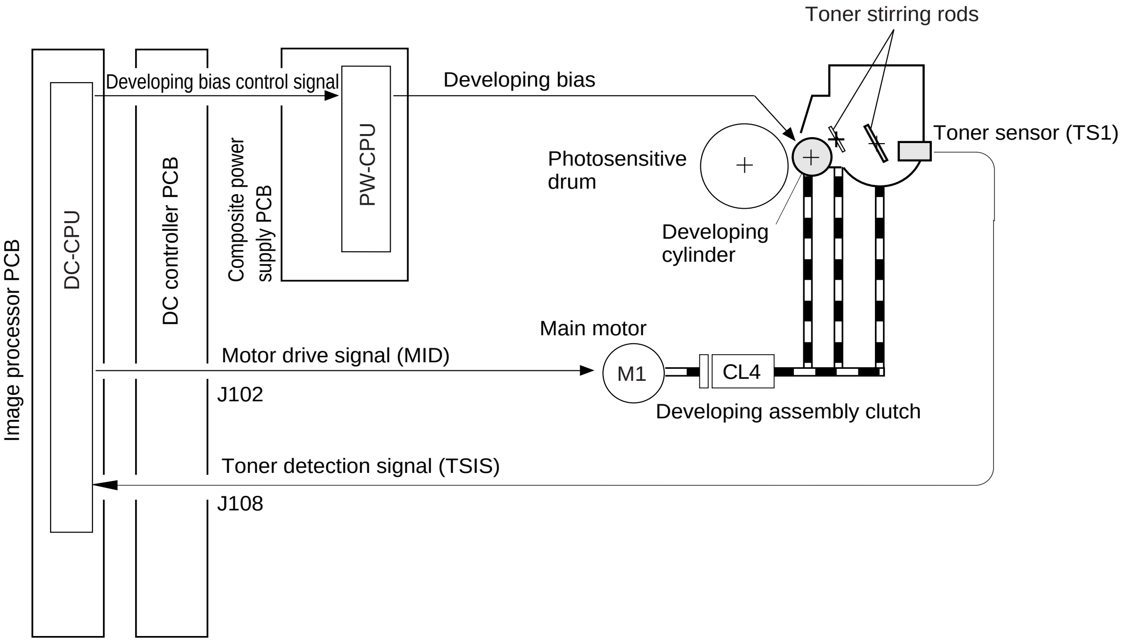

Toner stirring rods
Developing bias control signal
Developing bias
PW-CPU
Composite power supply PCB
DC controller PCB
DC-CPU
Image processor PCB
Photosensitive drum
Toner sensor (TS1)
Developing cylinder
Main motor
Motor drive signal (MID)
M1
CL4
J102
Developing assembly clutch
Toner detection signal (TSIS)
J108

Figure 6-200

B. Controlling the Developing Bias

1. Outline

A DC bias and an AC bias are applied to the developing cylinder. The output is controlled by the composite power supply PCB according to control signals from the image processor PC for the following:

- Turning on and off the developing bias AC component.
- Turning on and off the developing bias DC component.
- Turning on and off the developing bias DC component.

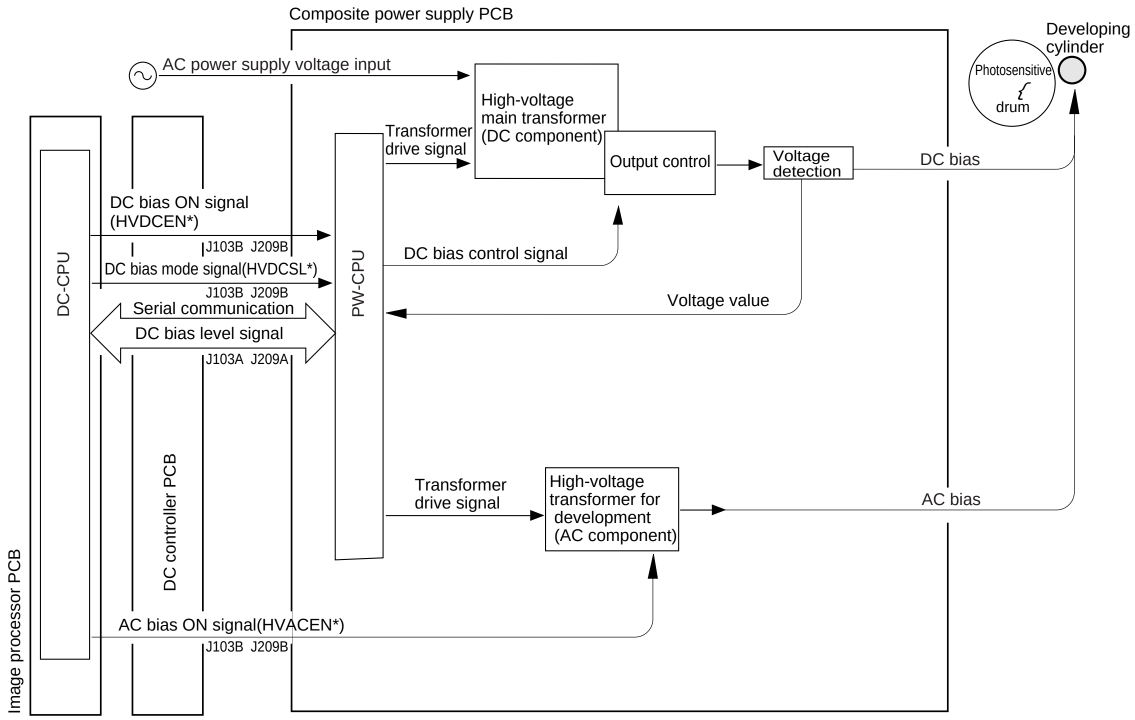

Composite power supply PCB
Developing cylinder
Photosensitive drum
AC power supply voltage input
High-voltage main transformer (DC component)
Transformer drive signal
Output control
Voltage detection
DC bias
DC bias ON signal (HVDCEN*)
J103B J209B
DC bias mode signal(HVDCSL*)
J103B J209B
DC bias control signal
Voltage value
Serial communication
DC bias level signal
J103A J209A
DC-CPU
PW-CPU
DC controller PCB
Transformer drive signal
High-voltage transformer for development (AC component)
AC bias
AC bias ON signal(HVACEN*)
J103B J209B
Image processor PCB

Figure 6-201

2. Turning On and Off the Developing Bias DC Component

The DC bias ON signal from the image processor PCB goes '0'.

⇩

The PW-CPU of the composite power supply PCB generates the bias control (pulse) signal.

⇩

The output of the high-voltage main transformer is applied to the developing cylinder.

3. Turning On and Off the Developing Bias AC Component

The developing bias AC component is controlled as follows:

The AC bias ON signal from the image processor PCB goes '0'.

⇩

The AC component transformer is turned on.

⇩

An AC component is added to the developing bias DC component, and the result is applied:
- AC component amplitude Vpp = 800 V
- AC component frequency Vf = 1840 Hz

4. Controlling the Developing Bias DC Component to Constant Voltage

The output of the DC bias is controlled by the DC bias control signal from the PW-CPU as follows:

The output voltage of the DC bias is returned to the PW-CPU.

⇩

The pulse width of the DC control signal is varied as necessary according to the return voltage.

⇩

The DC bias is maintained to a specific voltage.

5. Controlling the Level of the Developing Bias DC Component (1)

In memory copying, the laser is driven based on binary image data, which does not have density information, preventing adjustment with a density correction curve for output images. As such, the density of images during memory copying is adjusted by varying the developing bias DC component. (For details, see Chapter 4 "Image Processing and Density Processing in Memory Copying.")

Related Service Mode

ADJUST>DEVELOP>**DE-OFST**	Enter the offset value for the developing bias DC component.

Be sure to enter the value indicated on the service label if you have replaced the composite power supply PCB.

6. Controlling the Level of the Developing Bias DC Component (2)

The level of the developing bias DC component is switched between image areas and non-image areas to prevent stray toner inside the machine.

Related Service Mode

ADJUST>DEVELOP>**DE-DC**	Enter the bias DC component output for image areas.
ADJUST>DEVELOP>**DE-NO-DC**	Enter the developing bias DC component output for non-image areas (sheet-to-sheet gap).

Be sure to enter the value indicated on the service label if you have replaced the image processor PCB or initialized the RAM.

C. Controlling Toner Level Detection

A toner sensor of a piezoelectric oscillation type (TS1) is mounted inside the developing assembly to monitor the level of toner.

When toner exists inside the developing assembly, the output of the toner sensor goes '1'; when the level of toner drops below a specific value, the output will go '0'.

The DC-CPU on the image processor PCB reads the output of the toner sensor while the developing clutch (CL4) remains on. It then computes the 0's (most recent two cases) of the toner sensor output, and indicates the Add Toner message in the touch panel as needed.

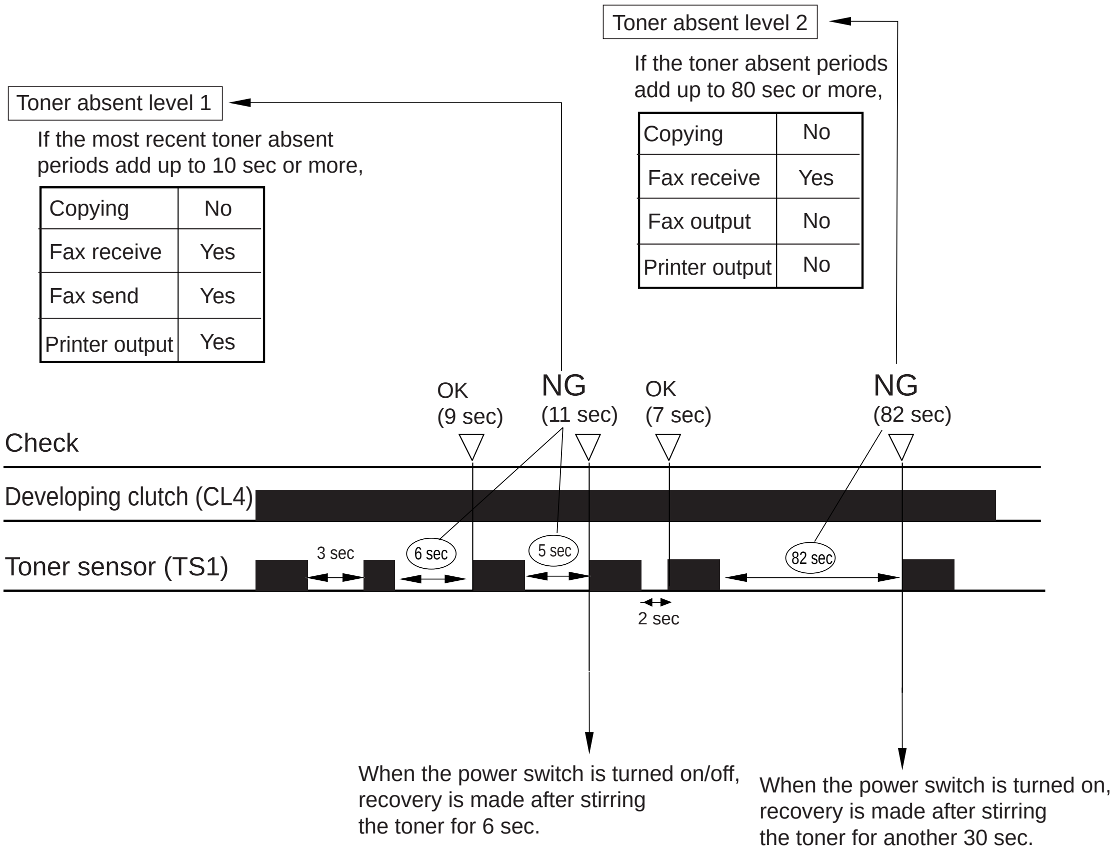

Toner absent level 2
If the toner absent periods add up to 80 sec or more,
Copying No
Fax receive Yes
Fax output No
Printer output No
Toner absent level 1
If the most recent toner absent periods add up to 10 sec or more,
Copying No
Fax receive Yes
Fax send Yes
Printer output Yes
OK (9 sec)
NG (11 sec)
OK (7 sec)
NG (82 sec)
Check
Developing clutch (CL4)
Toner sensor (TS1)
3 sec
6 sec
5 sec
82 sec
2 sec
When the power switch is turned on/off, recovery is made after stirring the toner for 6 sec.
When the power switch is turned on, recovery is made after stirring the toner for another 30 sec.

Figure 6-202

III. DRUM CLEANER

A. Outline

The drum cleaner consists of the cleaning blade, waste toner sensor (PS14), and waste toner feeding blade.

The waste toner scarped off the drum is moved to the rear of the cleaner case by the feeding blade, which is driven by the main motor. The waste toner case is monitored by the waste toner sensor (PS14).

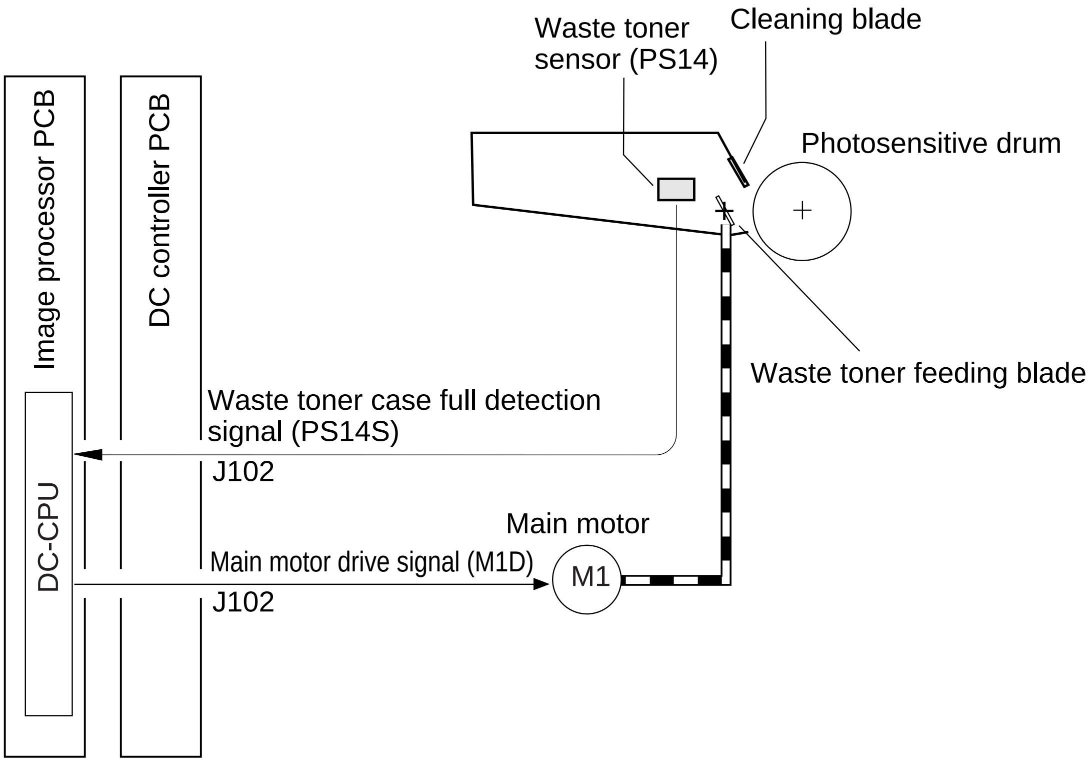

Waste toner sensor (PS14)
Cleaning blade
Photosensitive drum
Image processor PCB
DC controller PCB
Waste toner feeding blade
Waste toner case full detection signal (PS14S)
J102
DC-CPU
Main motor
Main motor drive signal (M1D)
M1
J102

Figure 6-301

B. Detecting Waste Toner

The coupling shown in Figure 6-302 is butted against the blade drive mechanism by the force of a spring, thereby transmitting the drive of the main motor to rotate the blade.

When the cleaner case becomes full of waste toner, the rotation of the waste toner feeding blade starts to drag, causing the coupling to move back and forth in axial direction and pushing the waste toner sensor lever and, as a result, turning on and off the waste toner sensor (PS14) repeatedly.

The machine assumes that the waste toner case is full under the following conditions, and will indicate the Waste Toner Case Full message while in standby state:

- The waste toner sensor turned on and off five times or more in 5 sec.
- The waste toner sensor generated the OFF signal for 1.5 sec or more.

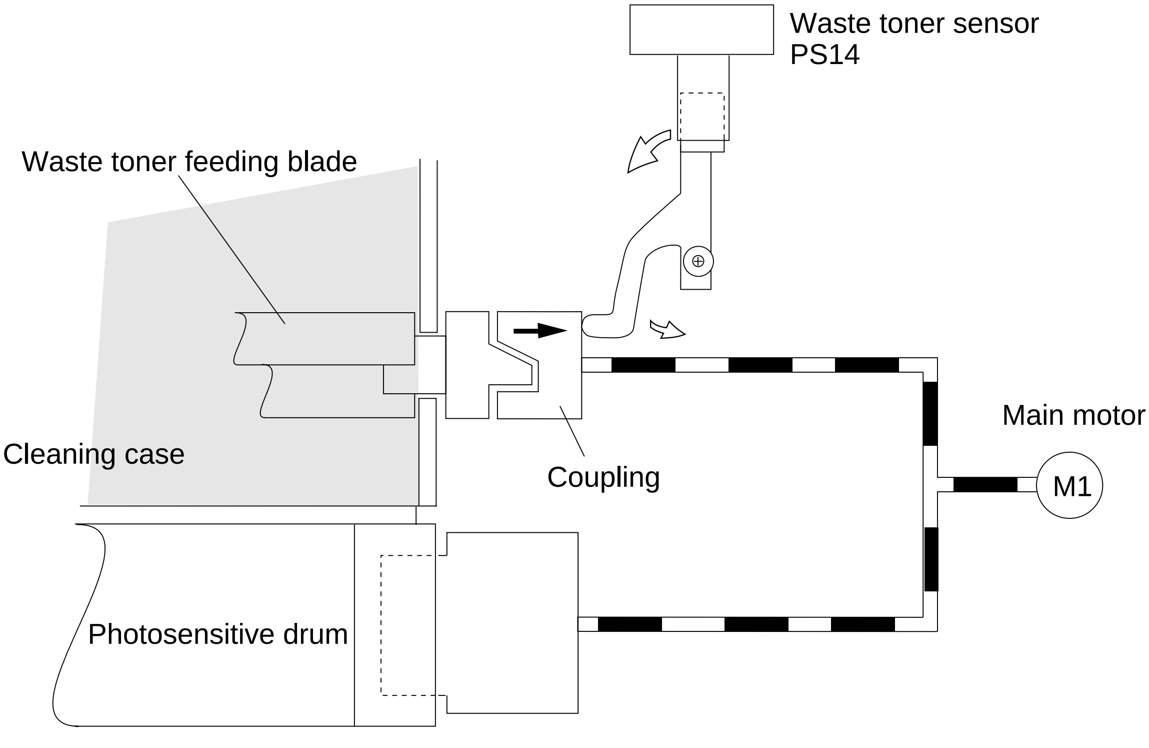

Waste toner sensor
PS14
Waste toner feeding blade
Main motor
Cleaning case
Coupling
M1
Photosensitive drum

Figure 6-302

IV. DISASSEMBLY/ASSEMBLY

Be sure to observe the following when disassembling/assembling the parts:

1. ⚠ The power plug must be disconnected before starting the work.
2. The steps used to disassemble the parts must be reversed when assembling them, unless otherwise noted.
3. The screws must be identified by type (length, diameter) and location.
4. The washer used with a specific mounting screw (e.g., for grounding wire and varistor) must not be left out to ensure electric conductivity.
5. The screws that are paint-locked in place must not be removed during disassembly work.
6. Do not throw toner into fire. It may explode.

A. Drum Unit

1. Removing the Drum Unit

1) Open the front door.
2) Release the feeding assembly.
3) Release the developing assembly.
4) Remove the screw [1].
5) Pull the drum unit [2] slowly to the front.

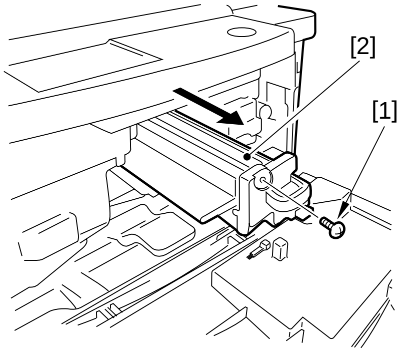


Figure 6-400

Caution:
1. Take care not to damage he photosensitive drum.
2. The photosensitive drum is extremely sensitive to light. Exposure to room light can lead to white spots or black bands.

2. Cleaning

If the surface of the photosensitive drum is soiled, wipe it with a flannel cloth coated with toner. (Do not use paper, lint-free or otherwise.)

Caution:
Do not dry wipe, or do not use solvent.
Do not use cleaning powder.

3. When Replacing the Drum Unit

When replacing the drum unit, fill out the label (figure 6-401) with the date and the counter reading; attach the label to the front cover of the new drum unit, and perform the Image Adjustment Basic Procedure.

œ t ﬂdate date Datum	J E ^ [counter compteur. Zahler	ı l notes note Notiz

Figure 6-401

After replacing the drum unit, be sure to clean the fixing separation claws (upper, lower).

B. Transfer Charging Roller

1) Open the front door, and release the feeding assembly.
2) Remove the screw, and detach the transfer charging roller unit.
3) Open the claw [1] of the bushing at the front, and slide the transfer charging roller [2] to the front to detach.

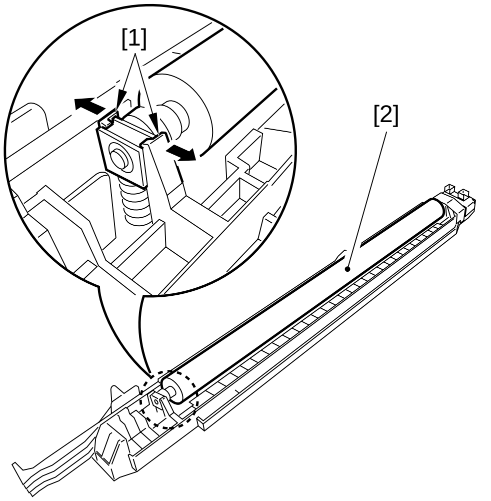


Figure 6-402

Caution:
Do not touch the surface [1] of the transfer roller; otherwise, image faults can occur.

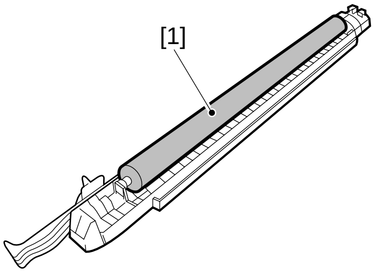


Figure 6-403

C. Drum Sensor Unit

1) Remove the drum unit.
2) While pulling the two claws [1], detach the drum unit [2].

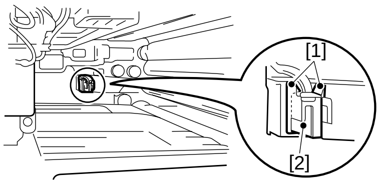


Figure 6-404

D. Magnet Plate

1. Removal Procedure

1) Open the front cover.
2) Release the feeding assembly and the developing assembly; then, detach the drum unit.
3) Remove the developing assembly.
4) Pull out the magnet plate [1] shown in the illustration and remove this plate from the transfer guide.

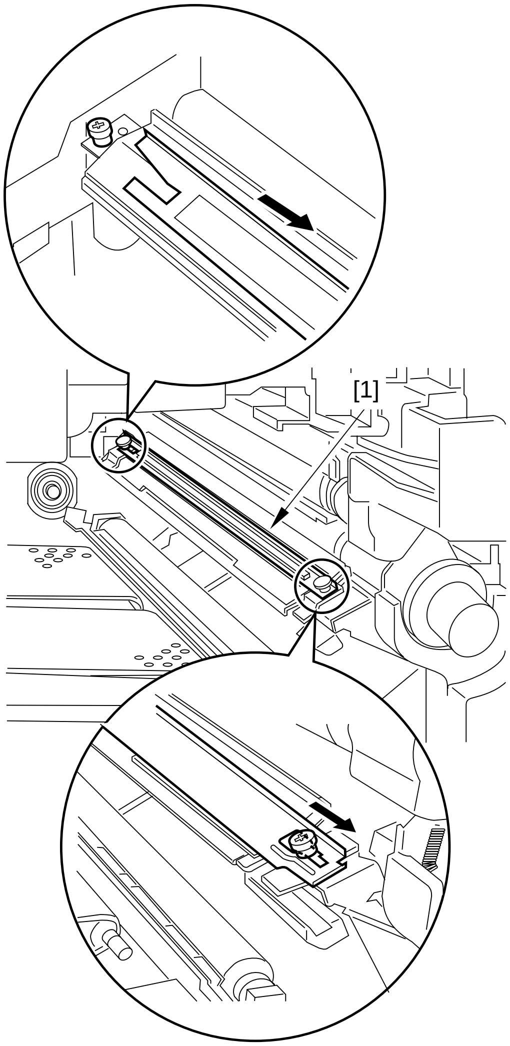


Figure 6-404-1

2. Cleaning

Clean with moist cloth every 1,200K copies. However, in case of soiling at the edge of copy papers, clean as often as required.

3. Attachment

1) Insert the pointed end of the magnet plate to the pin at the inner part of the transfer guide and then insert the plate with the oval hole to the pin toward the front of the transfer guide.
2) Take special care to insure that the magnet plate is inserted fully to the inner part.

E. Primary Charging Roller Cleaning Solenoid

1. Removing the Primary Charging Roller Cleaning Solenoid

1) Remove the following parts:
   - Drum unit
   - Developing assembly
   - Rear cover
   - Flywheel
   - Power cord mount
   - Composite power supply PCB
   - DC controller PCB
   - Low-voltage PCB
   - Accessories power supply PCB
   - Scanner cooling fan assembly
   - Main drive unit
   - Registration clutch
2) Free the harness, and remove the two screws [1]; then, detach the harness guide [2].

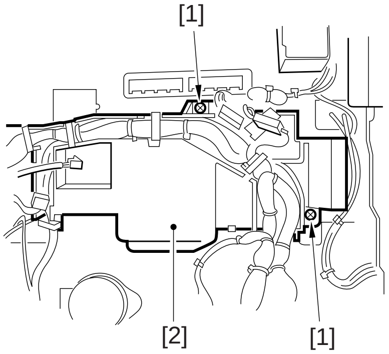


Figure 6-405

3) Remove the two screws [3], and detach the primary charging roller cleaning solenoid unit [4].

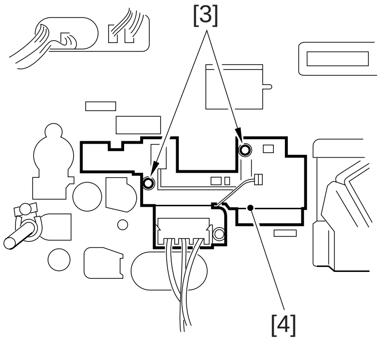


Figure 6-406

4) Disconnect the connector [5], and remove the two screws [6]; then, detach the primary charging roller cleaning solenoid [7].

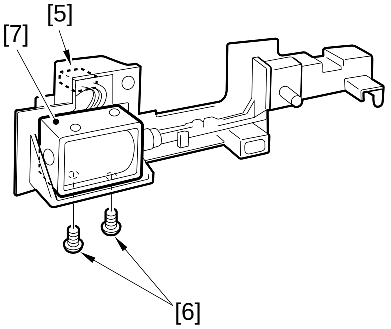


Figure 6-407

2. Adjusting the Position

Adjust the position of the primary charging roller cleaning solenoid (SL1) so that the length shown in Figure 6-408 is 4.0 ±0.2 mm.

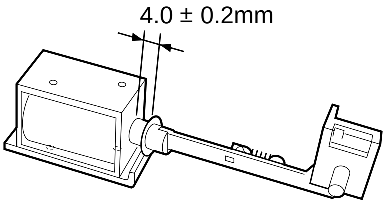


Figure 6-408

F. Developing Assembly

1. Removing the Developing Assembly

1) Open the front cover.
2) Shift down the developing assembly releasing lever [1], and remove the screw; then, detach the developing assembly stopper [2].

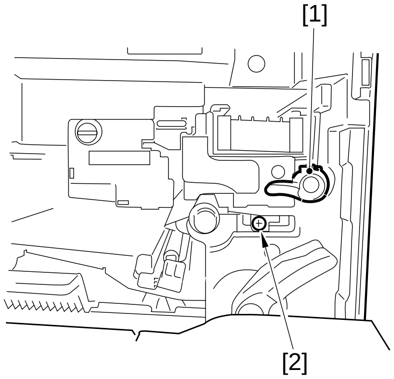


Figure 6-409

3) Release the feed lever.

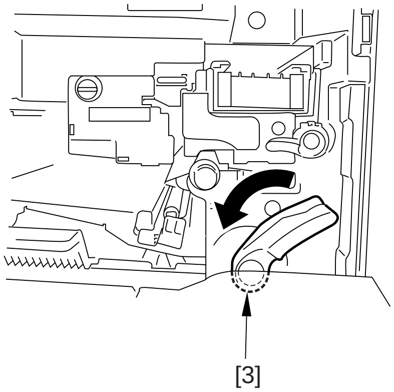


Figure 6-409-1

4) Holding the grip of the developing assembly, pull it to the front while supporting its bottom.

Caution:
1. When holding the developing assembly, do not try to hold it as if to sandwich the developing cylinder (to prevent toner from caking).
2. After mounting the developing assembly, be sure to mount the developing assembly stopper.
3. The distance between he cylinder and the blade is adjusted to a high accuracy at the factory. Do not try to adjust it.

When attaching the dveloping assembly, take special care to insure that the transfer guide is provided with the magnet plate [4].

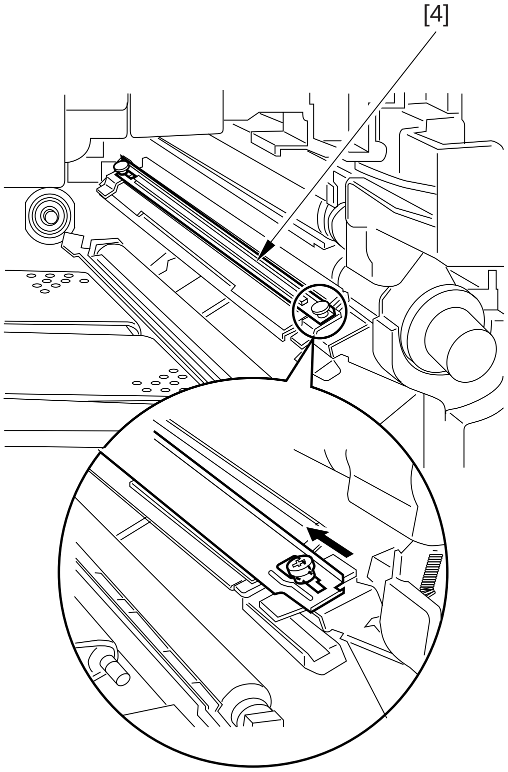


Figure 6-409-2

2. Removing the Toner Sensor

1) Slide out the developing unit.
2) Remove the tapping screw [2], and disengage the three hooks [3]; then, remove the grip [1] of the developing assembly.

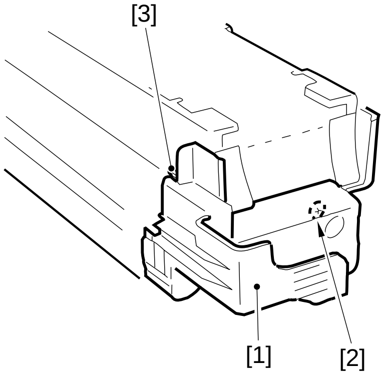


Figure 6-410

3) Remove the two screws [4], and disconnect the connector [5]; then, detach the toner sensor.

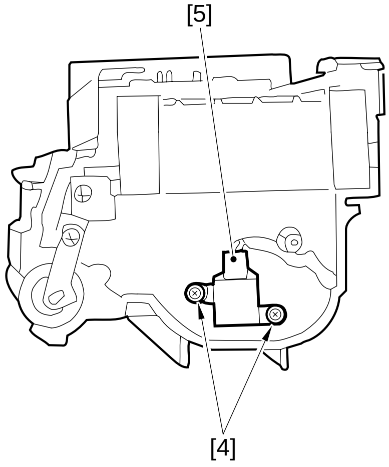


Figure 6-411

3. Removing the Blade Mount

1) Remove the two screws (M3x4) [2], and disengage the three hooks [3]; then, detach he developing assembly upper cover [1].

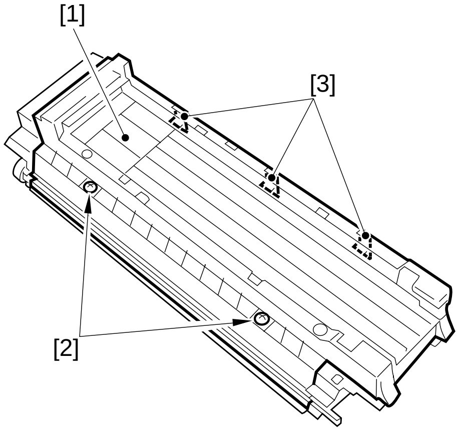


Figure 6-412

2) Remove the two screws [5], and detach the blade mount [4].

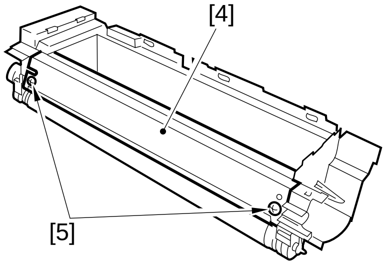


Figure 6-413

Caution:
The blade is adjusted at the factory when it is mounted to the blade mount; do not detach it from the mount.

4. Removing the Developing Cylinder

1) Remove the developing assembly from the copier.
2) Remove the grip of the developing assembly.
3) Detach the developing assembly upper cover.
4) Remove the E-ring [1], and remove the bearing [2] and the gear [3].

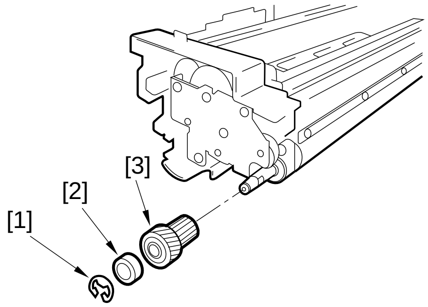


Figure 6-414

5) Remove the two screws [4], and remove the gear cover [5] and the two gears [6].

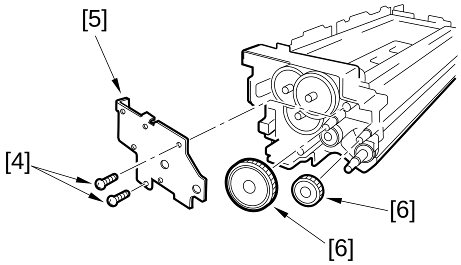


Figure 6-415

6) Put a sheet of copy paper [7] between the developing cylinder and the blade.

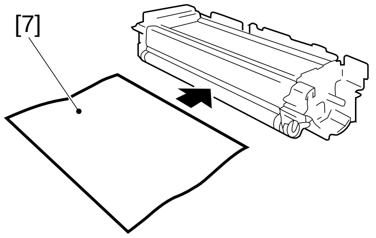


Figure 6-416

7) Remove the screw [8]; then, detach the grounding plate [9] and the grip ring [10].

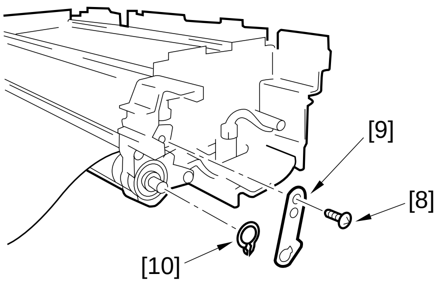


Figure 6-417

8) Remove the two screws [11]; then, detach the sleeve holder (front) and the roll [13].

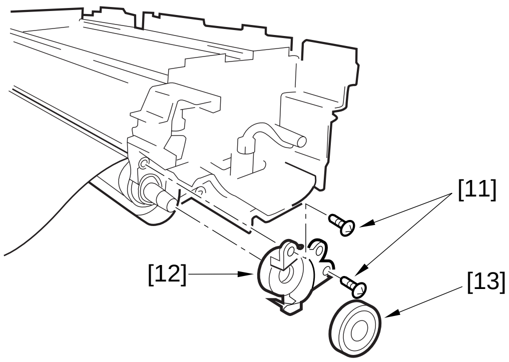


Figure 6-418

9) Remove the two screws [14]; then, detach the sleeve holder (rear) [15] and the roll [16].

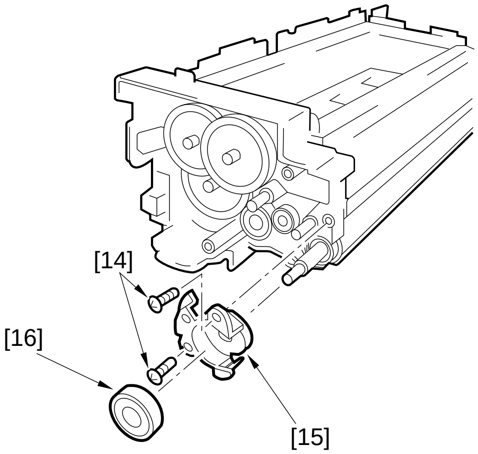


Figure 6-419

10) Remove the developing cylinder [17] together with the bearings [18].

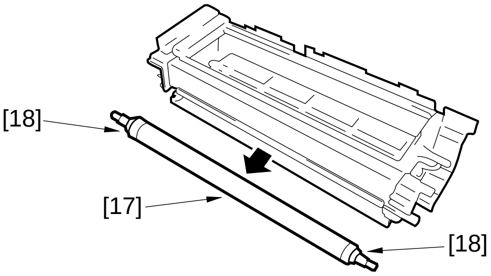


Figure 6-420

5. Positioning the Developing Assembly Magnetic Seal

Butt the magnetic seal against the opening as shown in the figure; check to make sure that the magnetic seal and the housing are in firm contact.

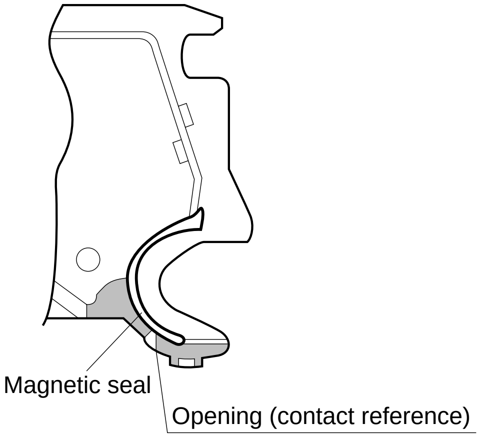

Magnetic seal
Opening (contact reference)

Figure 6-421

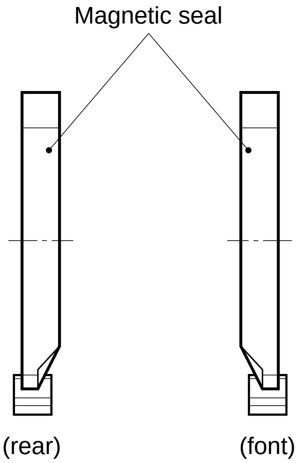

Magnetic seal
(rear)
(font)

Figure 6-422

6. Mounting the Developing Assembly Blade

The blade is adjusted to a high accuracy at the factory when it is mounted to the blade mount. Do not detach it from the mount.

- If the blade must be replaced on its own, adjust its position so that the distance between the blade and the developing cylinder is 0.21 ±0.03 mm using a gap gauge (CK-0057-000).

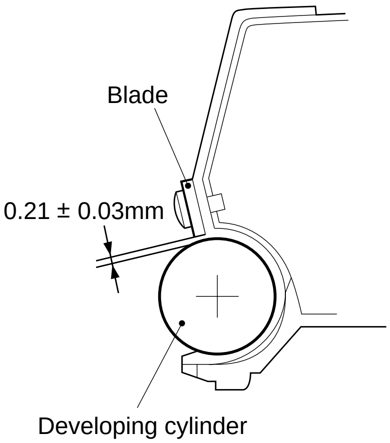


Figure 6-423

The surface of the developing cylinder is susceptible to damage. Be sure to guide the gap gauge along its both ends.

CHAPTER 7

PICK-UP/FEEDING SYSTEM

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I. OUTLINE OF OPERATIONS

A. Outline

The machine's pick-up/feeding system consists of the upper/lower cassette and the multifeeder, and it uses a center reference method, in which paper is moved in the middle of the pick-up path.

Paper picked up from the cassette or the multifeeder is controlled by the registration roller so that its leading edge matches the image on the photosensitive drum, and is sent to the copy tray through the transfer, separation, feeding, and fixing assemblies.

As many as 13 sensors are used to monitor the movement of paper, and 11 sensors are used to detect jams.

Figure 7-101 shows the arrangement of sensors (input parts), while Figure 7-102 shows clutches and solenoids (output parts). (These figures are conceptual diagrams, and omit the cassette drive system.)

Notation	Name	Signal	Pin No.*
PS3	Multifeeder paper sensor	PS3S	J108-B17
PS4	Pre-registration paper sensor	PS4S	J108-B11
PS6	Reversal assembly inlet sensor	PS6S	J106-2
PS7	Delivery sensor	PS7S	J107-2
PS8	Duplexing assembly inlet paper sensor	PS8S	J114-B2
PS9	Re-pick up paper sensor	PS9S	J114-B5
PS10	Horizontal registration sensor	PS10S	J114-B8
PS11	Vertical path paper sensor	PS11S	J108-B8
PS18	Pick-up sensor 1	PS18S	J108-A17
PS19	Pick-up sensor 2	PS19S	J108-A18
PS40	Fixing assembly outlet sensor	PS40S	J114-A2
Q1604	Cassette 1 paper sensor	UCSPD	J108-A10
Q1605	Cassette 2 paper sensor	LCSPD	J108-A11

* Pin No. of the signal line on the DC controller PCB.

Table 7-101 Sensors in the Pick-Up/Feeding System

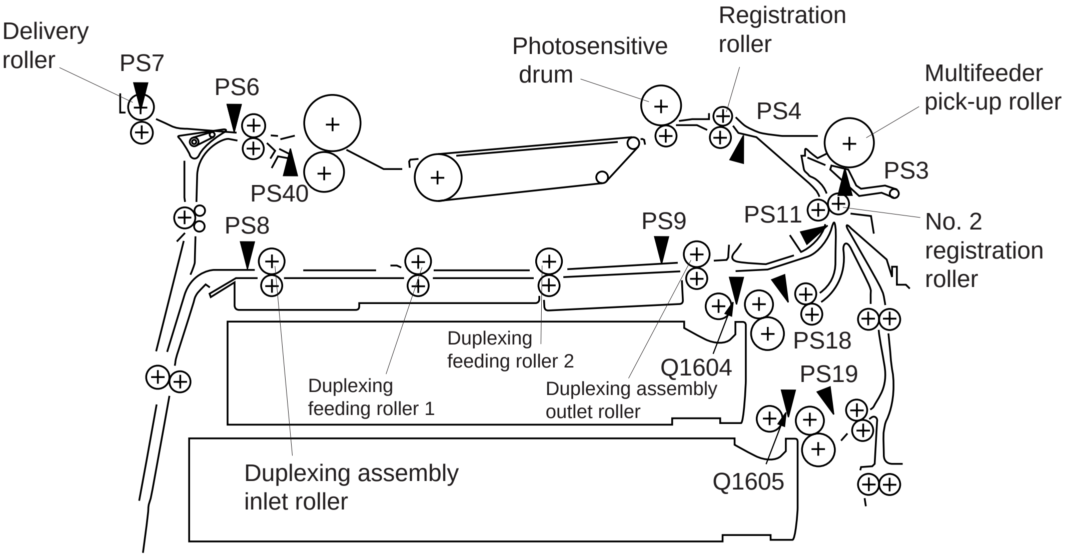

Delivery roller
PS7
PS6
PS40
Photosensitive drum
Registration roller
PS4
Multifeeder pick-up roller
PS3
PS11
No. 2 registration roller
PS9
PS8
Duplexing feeding roller 2
Duplexing feeding roller 1
Duplexing assembly outlet roller
Q1604
PS18
PS19
Q1605
Duplexing assembly inlet roller

Figure 7-101 Sensors in the Pick-Up Feeding System

Load No.	Name
CL1	Registration roller clutch
CL2	Multifeeder pick-up clutch
CL3	Vertical path roller clutch
SL1	Pick-up roller down solenoid
SL2	Delivery flapper solenoid
SL3	Multifeeder holding plate releasing solenoid
SL6	Fixing assembly inlet guide drive solenoid
M1	Main motor
M2	Fixing motor
M5	Pick-up motor
M6	Lower feeder motor
M7	Delivery assembly reversal motor
M8	Delivery motor
M9	Horizontal sensor shift motor
M10	Duplexing reversal motor

Table 7-102 Motors, Clutches, and Solenoids in the Pick-Up/Feeding System

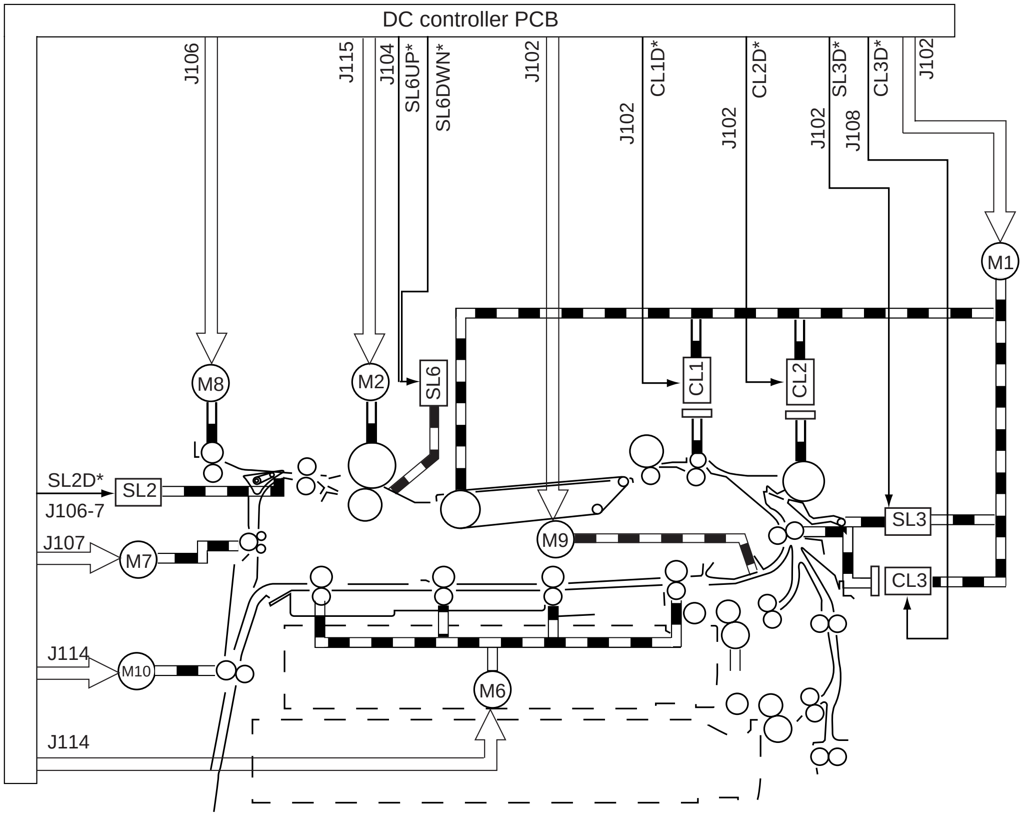

DC controller PCB
J106
J115
J104
SL6UP*
SL6DWN*
J102
J102
CL1D*
J102
CL2D*
J102
SL3D*
J108
CL3D*
J102
M1
M8
M2
SL6
CL1
CL2
SL2D*
SL2
J106-7
J107
M7
M9
SL3
CL3
J114
M10
M6
J114

Figure 7-102 Motors, Clutches, and Solenoids in the Pick-Up/Feeding System

B. Sequence of Operations (pick-up from the cassette)

1. Pick-Up Operation

The paper inside the cassette is held up by the lifter, and it is in contact with the pick-up roller at time of pick-up.

The pick-up roller is driven by the cassette pick-up motor (M5), but is moved down by means of a cam operated by the drive of the main motor (M1) switched by the pick-up roller down solenoid (SL1).

The feeding roller and the separation roller make sure that only one sheet of paper is moved to the feeding path; the paper is then moved as far as the registration roller by the No. 2 registration roller and the vertical path roller.

The drive of the vertical path roller and the No. 2 registration roller is switched by turning on and off the vertical path roller clutch (CL3).

The drive of the registration roller comes from the main motor (M1) by way of the registration roller clutch (CL1). Table 7-103 and Figure 7-103 show the loads in the cassette pick-up assembly and a conceptual diagram of the electrical parts.

Notation	Name	Signal	Terminal on the DC controller
M1	Main motor	M1D	J102-B11
M5	Cassette pick-up motor	Note	J108
CL1	Registration roller clutch	CL1D*	J102-B4
CL3	Vertical path roller clutch	CL3D*	J108-A4
SL1	Pick-up roller down solenoid	SL1D*	J108-A5

Note: Pulse signal, and cannot be checked for its state (0 or 1) by a meter.

Table 7-103 Loads of the Cassette Pick-Up Assembly

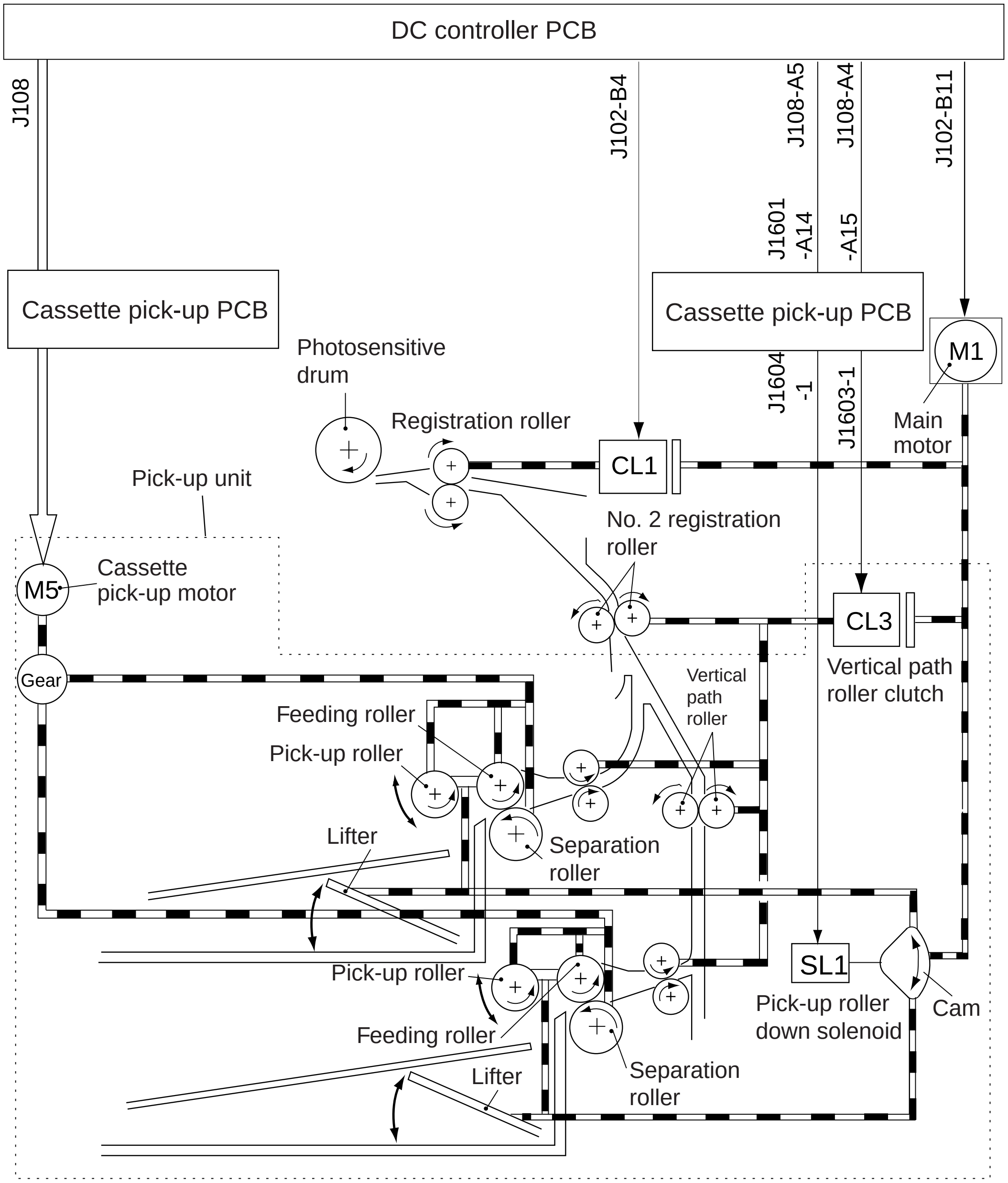

DC controller PCB
J108
J102-B4
J108-A5
J108-A4
J102-B11
J1601
-A14
-A15
Cassette pick-up PCB
Cassette pick-up PCB
M1
Photosensitive drum
J1604
-1
J1603-1
Main motor
Registration roller
CL1
Pick-up unit
No. 2 registration roller
Cassette pick-up motor
M5
CL3
Vertical path roller clutch
Gear
Vertical path roller
Feeding roller
Pick-up roller
Lifter
Separation roller
Pick-up roller
SL1
Cam
Pick-up roller down solenoid
Feeding roller
Lifter
Separation roller

Figure 7-103 Conceptual Diagram of the Pick-Up Unit

Notation	Name	Signal	Pin No.*
Q1604	Cassette 1 paper sensor	UCSPD	J108-A2
Q1605	Cassette 2 paper sensor	LCSPD	J108-A11
Q1606	Cassette 1 paper level sensor 0	1RPD0	J108-A13
Q1607	Cassette 1 paper level sensor 1	1RPD1	J108-A14
Q1608	Cassette 2 paper level sensor 0	2RPD0	J108-A15
Q1609	Cassette 2 paper level sensor 1	2RPD1	J108-A16

* Pin No. of the signal line on the DC controller PCB.

Table 7-104 Sensors on the Cassette Pick-Up PCB (pick-up unit)

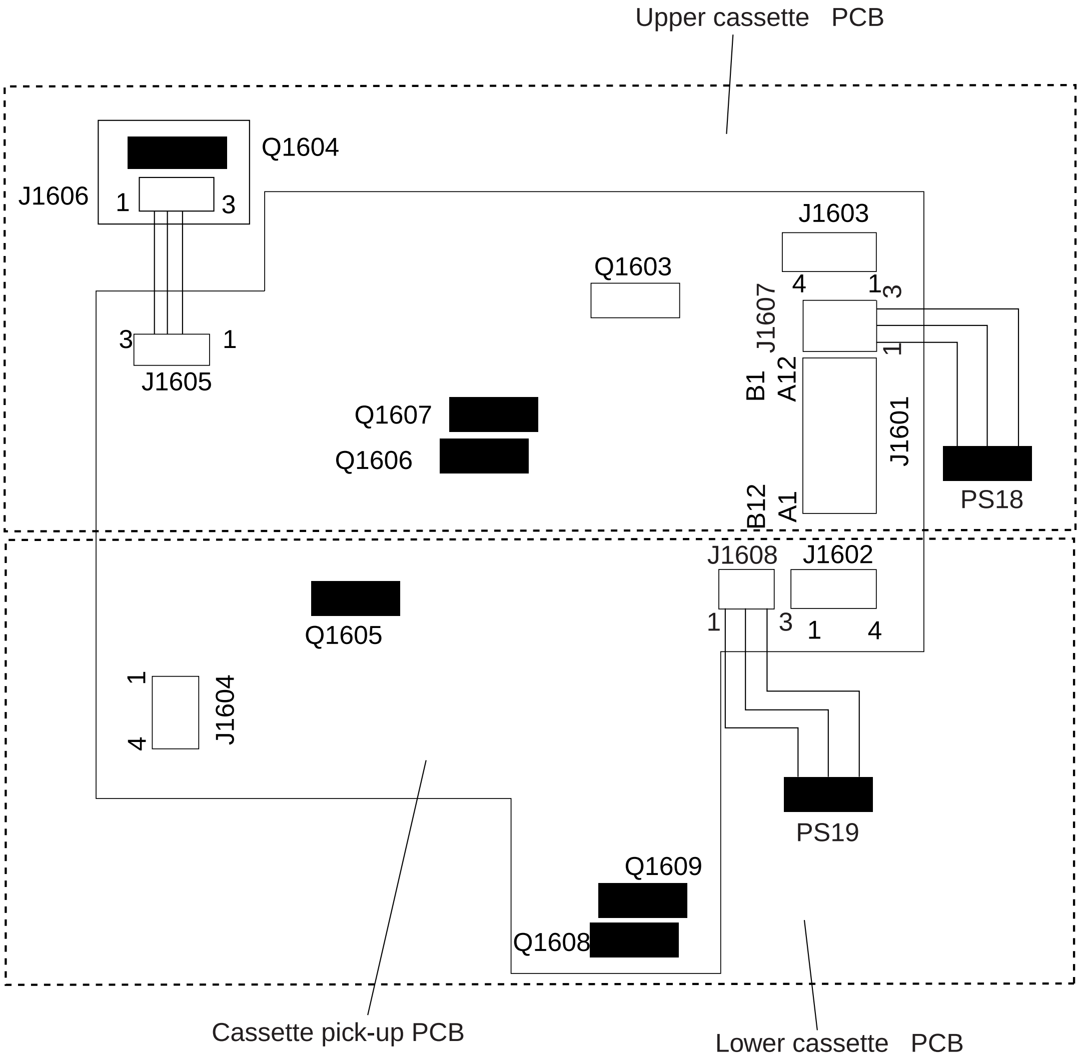

Upper cassette PCB
Q1604
J1606
1
3
J1603
4
1
3
Q1603
J1607
1
3
1
J1605
Q1607
Q1606
B1
A12
J1601
PS18
B12
A1
J1608
J1602
1
3
1
4
Q1605
1
4
J1604
PS19
Q1609
Q1608
Cassette pick-up PCB
Lower cassette PCB

Figure 7-104 Sensors on the Cassette Pick-Up PCB

2. Sequence of Operations

- Cassette 1, A4, 2 Copies, Continuous, Face-Up Delivery

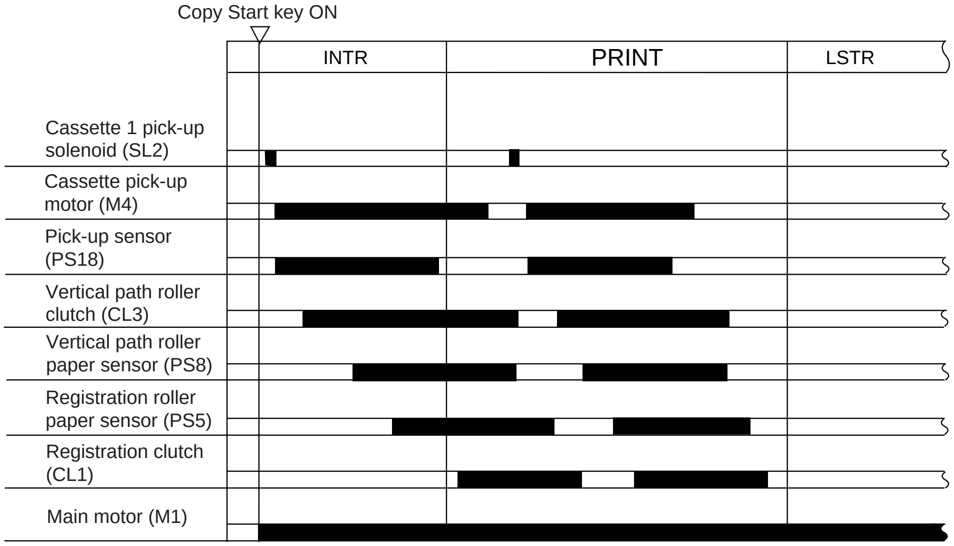


Figure 7-105 Pick-Up from the Cassette

3. Movement of the Cassette Lifter

The cassette lifter is operated at such times as needed during copying operation to keep the surface of a stack of copy paper at a specific level.

a. Driving the Lifter during Copying Operation

The cassette lifter is controlled by the movement of the pick-up roller shaft. The lifter starts to move when the pick-up roller shaft pushes down the lifter trigger lever to release the cam, and the lifter is operated until the lifter trigger lever stops the movement of the cam.

1) The pick-up roller shaft moves down each time the pick-up roller down solenoid turns on to initiate pick-up operation.
   The distance traveled by the pick-up roller shaft varies according to the level of copy paper.

2) When the cassette starts to run out of paper and, as a result, the pick-up roller shaft moves down accordingly farther to reach the decreasing stack, the lifter trigger lever pushes the pick-up roller shaft, thereby releasing the cam to rotate.

3) The rotation of the cam rotates the eccentric cam mounted to the same shaft. The eccentric cam operates the lever to move up the lifter.

4) As the lifter moves up, the level of the stack moves up, causing the pick-up roller shaft to move down less. As a result, the lifter trigger lever is pulled back by the force of a spring to keep the cam in check.

The foregoing operations are repeated; when the cassette runs out of paper and the cassette paper sensor detects the absence of paper, cassette pick-up operation ends.

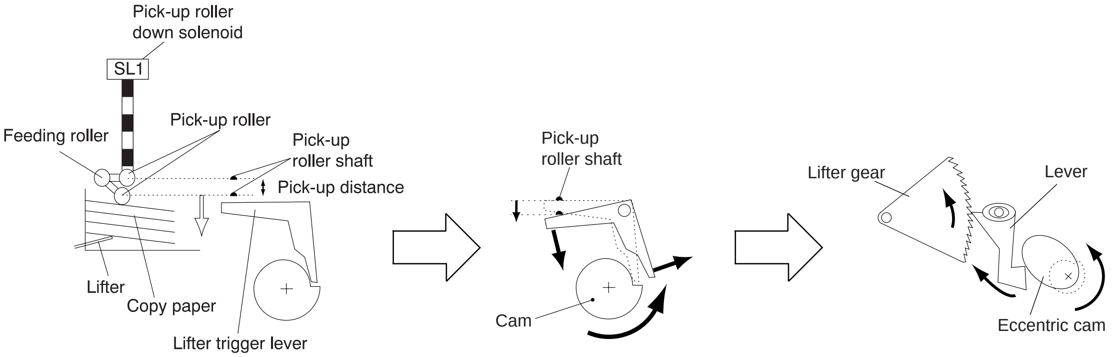

Pick-up roller down solenoid
SL1
Feeding roller
Pick-up roller
Pick-up roller shaft
Pick-up distance
Lifter
Copy paper
Lifter trigger lever
Pick-up roller shaft
Cam
Lifter gear
Lever
Eccentric cam

Figure 7-106 Cassette Lifter Movement

b. Releasing the Lifter

The lifter is released mechanically when the cassette is slid out. The lifter uses two types of claws, i.e., one moving up the lifter, and the other holding the lifter in place.

When the machine is in standby state, the lifter is held in place by the retaining claw; when the cassette is slid out, this claw is disengaged to free the lifter so that the lifter starts to move down.

Caution:

If the main power is removed while the lifter is moved up, the claw used to move up the lifter can at times remain in contact with the lifter gear. In such a condition, the lifter may not be released fully, and forcing it can lead to damage. To avoid a problem, turn off and then on the main power to put the machine in standby state.

4. Cassette Pick-U Operation

a. Rotating the Pick-Up Roller

The pick-up roller is rotated by the drive of the cassette pick-up motor (M5) transmitted by a gear. The upper or lower cassette pick-up operation is driven by rotating the cassette pick-up motor clockwise or counterclockwise.

b. Switching the Drive of the Pick-Up Roller

When the cassette pick-up roller rotates clockwise, the gear 1 moves up to drive the upper pick-up roller. When the roller rotates counterclockwise, on the other hand, the gear 1 move down to drive the lower pick-up roller. Figure 7-107 shows how the pick-up roller is controlled.

c. Pick-Up Roller Shaft Reference

When the cassette is set, the pick-up roller is moved down or the lifter is moved up with reference to the position of the pick-up roller shaft.

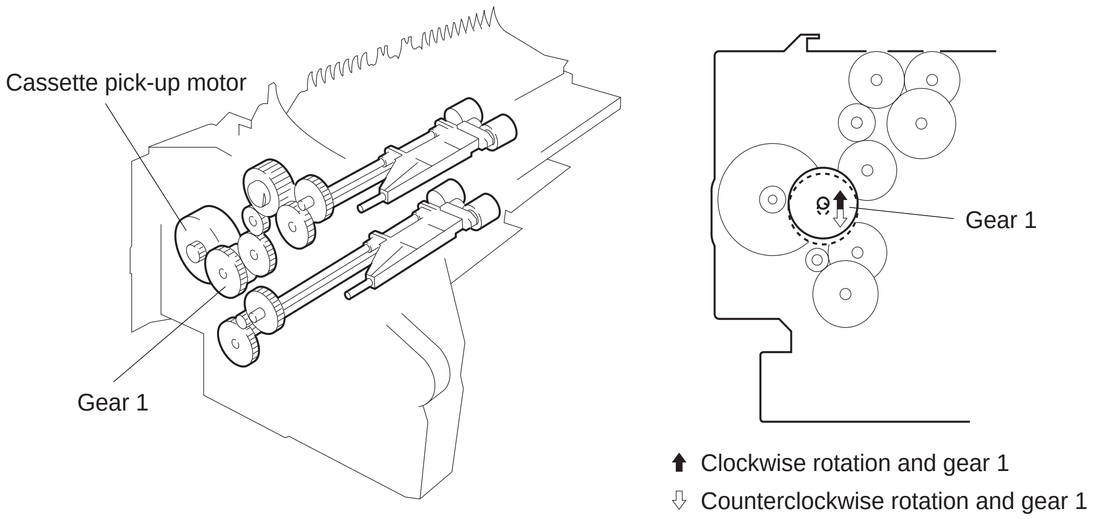

Cassette pick-up motor
Gear 1
Gear 1
⬆ Clockwise rotation and gear 1
⇩ Counterclockwise rotation and gear 1

Figure 7-107 Movement of the Gear 1

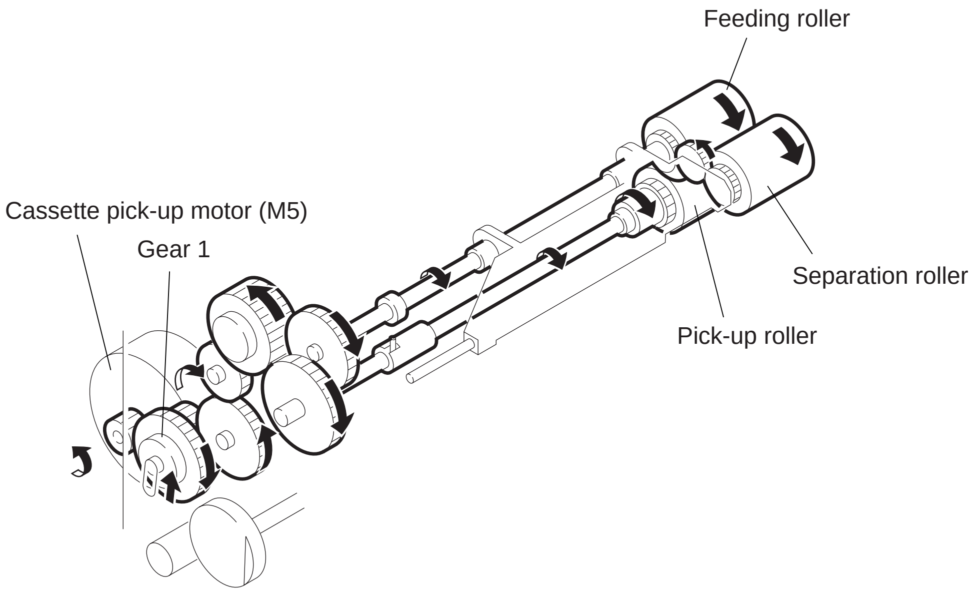

Feeding roller
Cassette pick-up motor (M5)
Gear 1
Separation roller
Pick-up roller

Figure 7-108 Upper Cassette Pick-Up Movement (pick-up motor rotating clockwise)

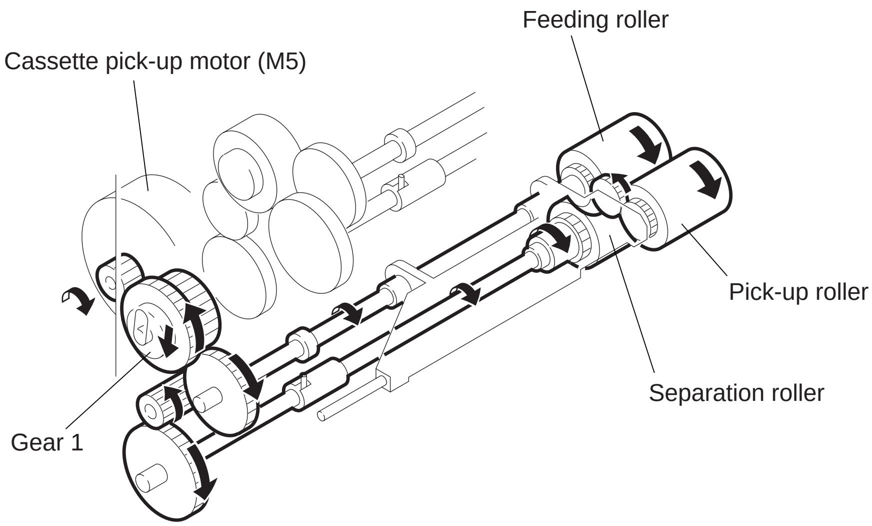

Feeding roller
Cassette pick-up motor (M5)
Pick-up roller
Separation roller
Gear 1

Figure 7-109 Lower Cassette Pick-Up Movement (pick-up motor rotating counterclockwise)

d. Moving Up/Down the Pick-Up Roller (pick-up operation)

The pick-up roller and the feeding roller are kept in a roller holder, and the pick-up roller operates in conjunction with the feeding roller shaft. The pick-up roller shaft is moved up/down by the cam 1, controlled by the pick-up solenoid (SL1) driven by the main motor (M1).

In standby, the pick-up roller shaft is at its upper limit, operating as follows when picking up a single sheet of paper:

1) The pick-up solenoid (SL1) turns on, and the drive of the cam motor rotates the cam 1.
2) As a result, the pick-up lever starts to swing.
3) As a result, the pick-up roller shaft moves down to come into contact with the stack of paper, and picks a single sheet by the drive of the pick-up motor (M5).
4) The cam 1 rotates and, as a result, the pick-up roll shaft moves up.

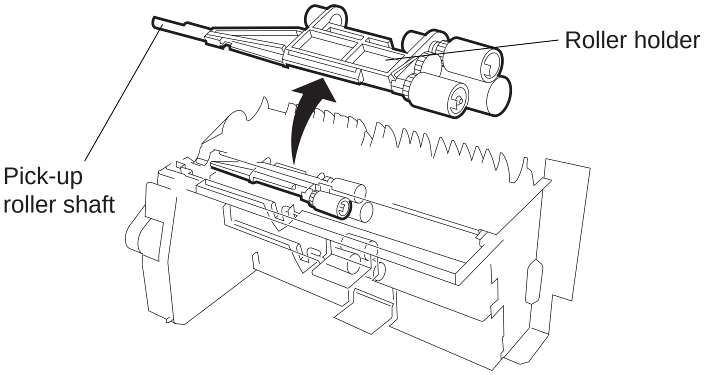

Roller holder
Pick-up
roller shaft

Figure 7-110 Pick-Up Roller Shaft Arrangement

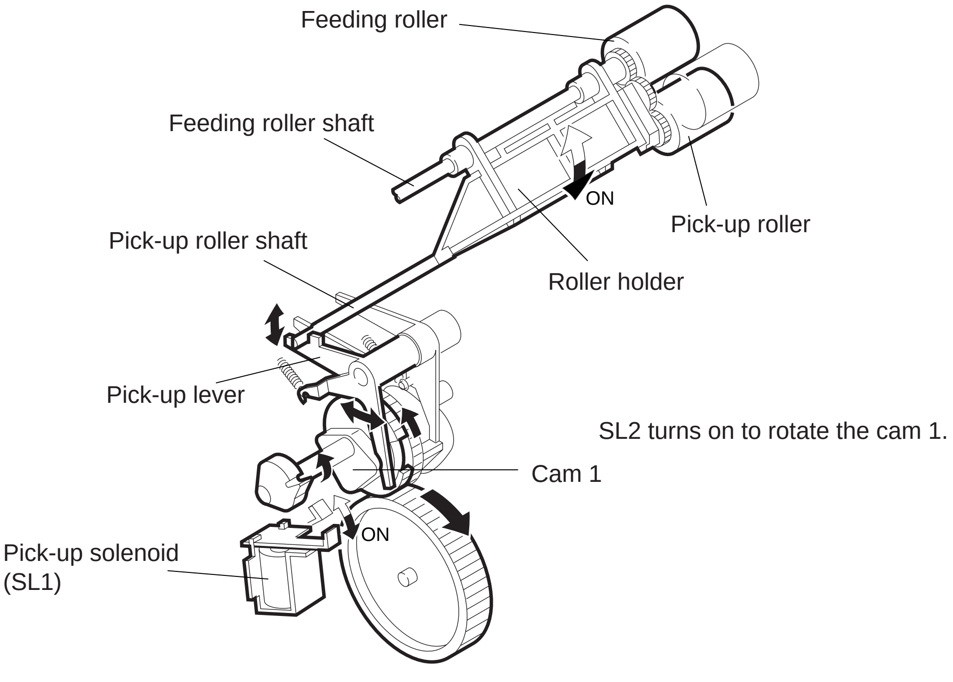

Feeding roller
Feeding roller shaft
ON
Pick-up roller
Pick-up roller shaft
Roller holder
Pick-up lever
SL2 turns on to rotate the cam 1.
Cam 1
ON
Pick-up solenoid
(SL1)

Figure 7-111 Pick-Up Roller Shaft Up/Down Movement

e. Detecting Paper in the Cassette

When the cassette runs out of paper, the paper detecting lever falls through the detecting hole. The paper detecting lever operates in conjunction with the light-blocking plate, which blocks the photointerrupter (Q1604 for cassette 1; Q1605 for cassette 2), enabling identification of the absence of paper (Figure 7-112).

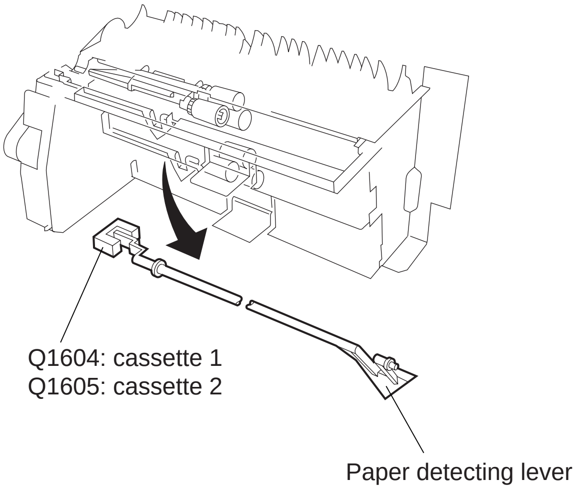


Figure 7-112 Detecting Lever and the Absence of Paper

f. Pick-Up Retry

If the pick-up sensor detects a delay because of wear on the pick-up roller or the like, the machine initiates a pick-up retry. If a delay is detected once again despite the retry, the machine will indicate the Jam message on the control panel, starting feeding control using the pull-out roller.

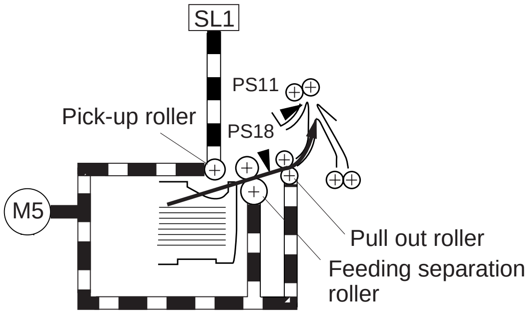

SL1
PS11
Pick-up roller
PS18
M5
Pull out roller
Feeding separation roller

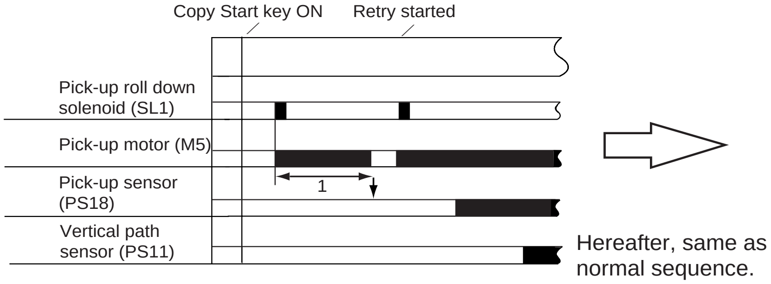
Figure 7-113

	Name
M5	Pick-up roller
SL1	Pick-up roller down solenoid
PS11	Vertical path sensor
PS18	Cassette 1 pick-up sensor

Table 7-105

- Detecting a Delay

Paper does not reach the pick-up sensor within a specific time after the pick-up roller down solenoid (SL1) turns on.


Copy Start key ON
Retry started
Pick-up roll down solenoid (SL1)
Pick-up motor (M5)
Pick-up sensor (PS18)
Vertical path sensor (PS11)
1
Hereafter, same as normal sequence.

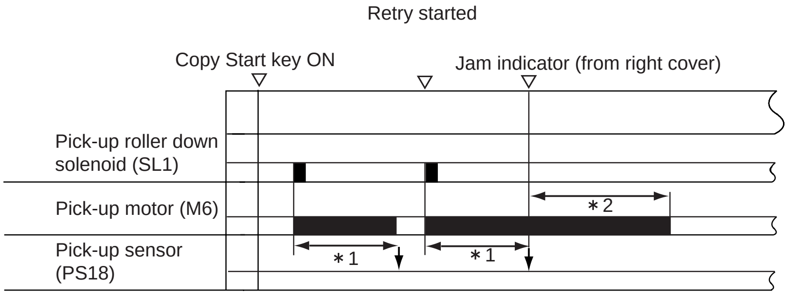
*1 If paper does not arrive after detection of about 1 sec, retry operation is started.

Figure 7-114 Retry Operation

- Pulling Out Paper

If the pick-up sensor detects a delay once again after retry operation, calling for jam removal, working from the cassette side could tear out the paper. To enable jam removal from the side of the right cover, the following takes place:

1) After jam detection, the pull-out roller is driven for a feed length of 10 cm. The paper is moved so that it will be in view when the right cover is opened.
2) The control panel indicates the Jam message, suggesting removal from the right cover side.
3) Open the right cover, and remove the jam. If the paper is not visible even when the pull-out roller is operated, remove the paper from the cassette side.


Retry started
Copy Start key ON
Jam indicator (from right cover)
Pick-up roller down solenoid (SL1)
Pick-up motor (M6)
Pick-up sensor (PS18)
*2
*1
*1

*1: Paper does not arrive after detection of about 1 sec.
*2: Paper fed by the pull-out roller for a feed lengh of 10 cm.

Figure 7-115

C. Operation in Standby State

The machine operates as follows when the cassette is slid into or out of the machine:

1. Moving Up the Lifter and Moving Down the Pick-Up Roller Shaft (cassette slid in)

a. Moving Down the Pick-Up Roller Shaft

When the cassette is slid in while the main power is on, the pick-up roller shaft moves down until it comes into contact with the stack of paper:

- The rear end of the cassette mechanically pushes in the lever 1 of the pick-up unit.
- When the cassette size sensor turns on, the main motor (M1) and the pick-up solenoid (SL1) turn on to swing the pick-up lever.

■ The pick-up roller shaft is controlled by the lever 1 and the pick-up lever.

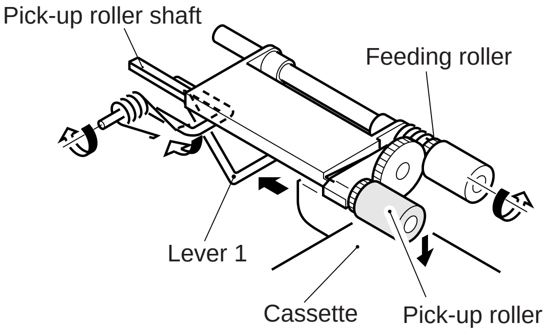


Figure 7-116 Movement of the Lever 1

b. Moving Up the Lifter

When the main power is turned on while the cassette is set or the cassette is set while in standby state, the pick-up roller shaft moves down to push down the lifter trigger lever. When the pick-up roller shaft pushes in the end of the lifter trigger lever, the cam is released, and the lifter moves up by the drive of the main motor (M1).

When the pick-up roller shaft in contact with the surface of the stack has moved to a specific level, the pick-up roller shaft returns to its uppermost position to end moving up the lifter.

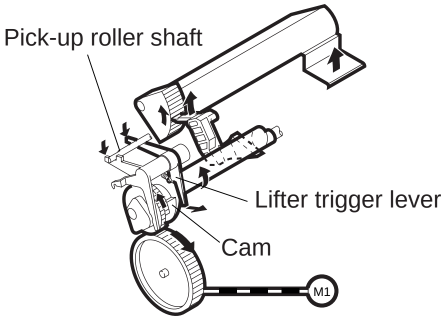


Figure 7-117 Moving Up the Lifter

2. Moving Up the Pick-Up Roller Shaft and Releasing the Lifter/Separation Roller (cassette slid out)

a. Moving Up the Pick-Up Roller Shaft and Releasing the Separation Roller

When the cassette is slid out of the machine, the pick-up roller shaft is moved up and the separation roller is released mechanically.

- Moving Up the Pick-Up Roller
  When the cassette is slid out, the lever rotates by the force of a spring, moving up the pick-up roller shaft so that the pick-up roller will not interfere with the cassette.

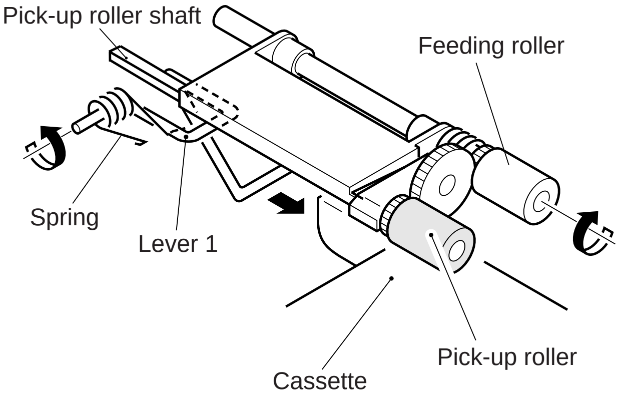

Pick-up roller shaft
Feeding roller
Spring
Lever 1
Cassette
Pick-up roller

Figure 7-118 Moving Up the Pick-Up Roller

- Releasing the Separation Roller
  The lever 1 is provided with a protrusion for pushing down the separation roller assembly. When the cassette is slid out, the lever 1 rotates to move down the separation roller, thereby disengaging the separation roller and the feeding roller (Figure 7-119).

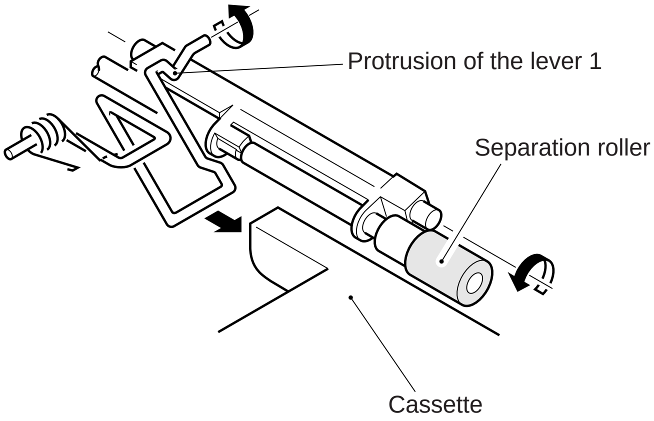

Protrusion of the lever 1
Separation roller
Cassette

Figure 7-119 Releasing the Separation Roller

b. Releasing the Lifter

The lifter is released when the cassette is slid out while in standby state.

D. Detecting the Level of Paper

The machine checks the volume of paper in the cassette, and indicates it in terms of four levels.

The level is identified using a sensor and the light-blocking plate mounted to the lifter gear. As the cassette runs out of paper, the lifter moves up gradually; when the cassette fully runs out of paper, the cassette sensor (Q1604 for cassette 1) detects the absence of paper.

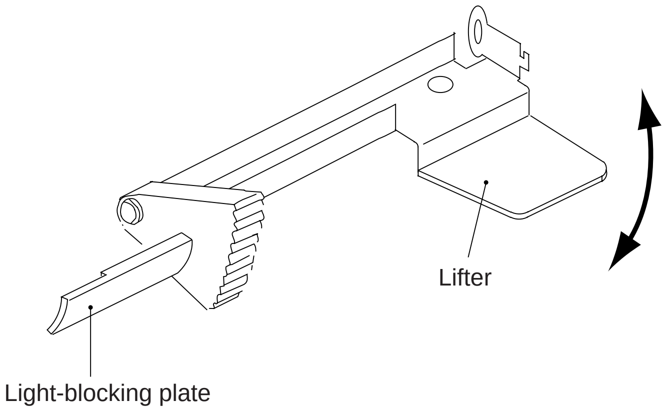
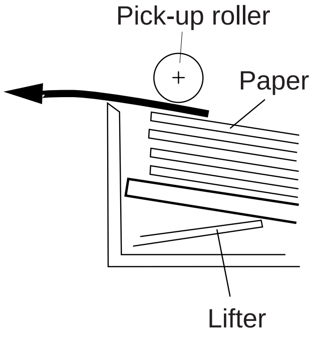
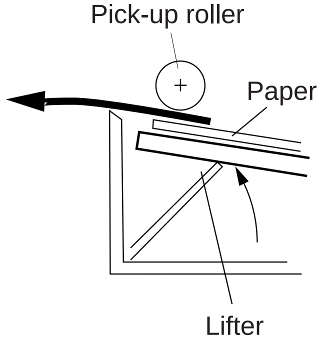
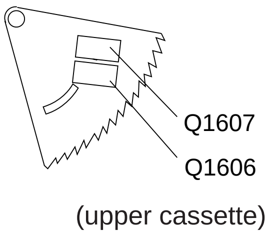
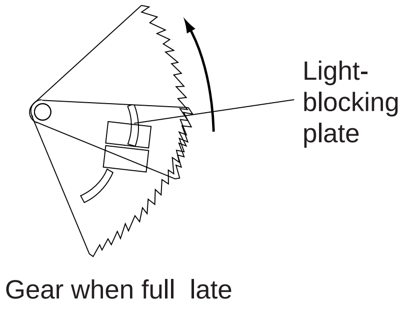

Lifter
Light-blocking plate

Figure 7-120

	Paper full	Paper absent
Lifter condition	 Pick-up roller Paper Lifter	 Pick-up roller Paper Lifter
Gear and level sensor	 Q1607 Q1606 (upper cassette)	 Light-blocking plate Gear when full late

Note: The diagrams represent views from the rear.

Figure 7-121 Level of Paper in the Cassette (upper)

Table 7-106 shows the relationship between paper levels and sensor states and the indications on the control panel.

Level	Q1606	Q1607	Indication
	(upper cassette)		
	Q1608	Q1609	
	(lower cassette)		
500 sheets	0	0	☰
	1	0	
	1	1	⚌
0	0	1	⚊ ⊔

1: The light-blocking plate is over the sensor.
0: The light-blocking plate is not over the sensor.

Table 7-106

The absence of paper is detected by the cassette paper sensor.

E. Identifying the Size of Paper

1. Outline

The size of paper is identified in relation to the cassette dial set by the user. (The AB and Inch configurations are changed by means of a switch.)

a. Identifying the Size

The cassette dial may be set to any of 16 steps. When the dial is set for a specific paper size and the cassette is slid into the machine, the cassette size detecting switch will identify the size of the paper inside the cassette based on the combination of the protrusion and recess on the size detecting cam.

b. AB/Inch Switch

The AB or Inch configuration is selected by means of a switch. When the switch is set and the cassette is slid into the machine, the cassette size detecting switch of the upper cassette inside the copier will identify either AB or Inch configuration.

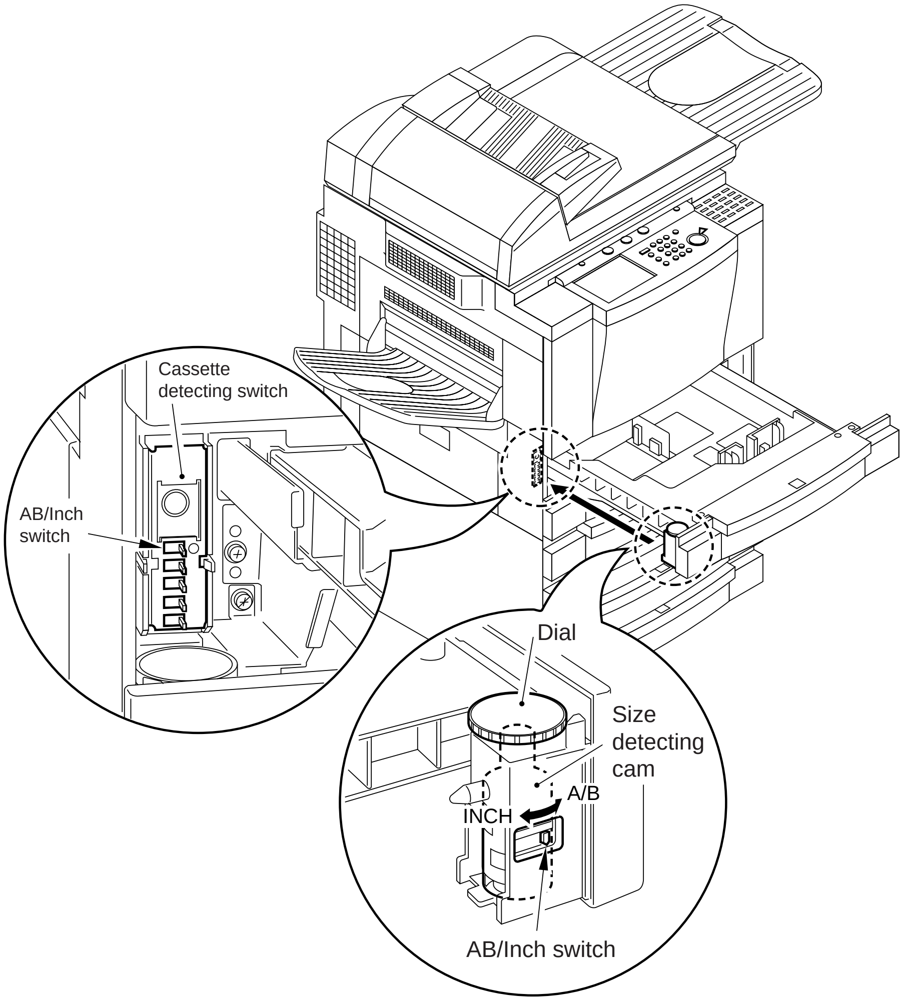


Figure 7-122

2. Cassette Size Detecting Switch and Paper Size

Table 7-123 shows the states of the cassette size detecting switches and the paper sizes they identify:

Configuration	Cassette		Switch states				
			SW1	SW2	SW3	SW4	SW5
AB	No cassette		OFF	OFF	OFF	OFF	OFF
	A5		OFF	ON	ON	OFF	ON
	A5R		OFF	ON	ON	ON	ON
	A4		OFF	ON	ON	ON	OFF
	A4R		OFF	ON	OFF	ON	OFF
	A3		OFF	ON	OFF	ON	ON
	B5		OFF	ON	OFF	OFF	ON
	B5R		OFF	ON	OFF	OFF	OFF
	B4		OFF	ON	ON	OFF	OFF
	U1	FLSO	OFF	OFF	OFF	OFF	OFF
		OFICIO					
		A-OFI					
		E-OFI					
		B-OFI					
		A-LGL					
	U2	FOLIO	OFF	OFF	ON	OFF	ON
	U3	A-FLS	OFF	OFF	ON	ON	ON
Inch	No cassette		OFF	OFF	OFF	OFF	OFF
	STMT		ON	ON	ON	OFF	ON
	STMTR		ON	ON	ON	ON	ON
	LTR		ON	ON	ON	ON	OFF
	A-LTR						
	LTRR		ON	ON	OFF	ON	OFF
	A-LTRR						
	LGL		ON	ON	OFF	ON	ON
	11x17		ON	ON	OFF	OFF	ON
	U4		ON	ON	OFF	OFF	OFF
	U5		ON	ON	ON	OFF	OFF
	U6		ON	OFF	ON	OFF	OFF
	U7		ON	OFF	ON	OFF	ON
	U8		ON	OFF	ON	ON	ON

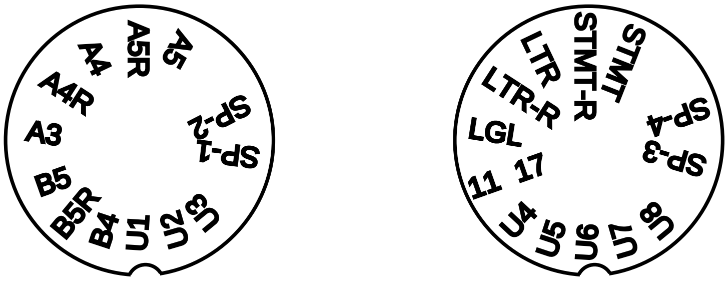
Figure 7-123 Paper Sizes

3. Paper Size

The width and length of paper are detected by the copier's CPU with reference to the cassette dial set by the user. Figure 7-124 shows the rotary label attached to the dial, and Table 7-107 shows the paper sizes that may be used for the machine.

Configuration	Cassette		Main scanning direction (mm)	Sub scanning direction (mm)
AB	A5		210	148
	A5R		148	210
	A4		297	210
	A4R		210	297
	A3		297	420
	B5		257	182
	B5R		182	257
	B4		257	364
	U1	FLSO	216	330
		OFICIO	216	317
		A-OFI	220	340
		E-OFI	220	320
		B-OFI	216	355
		A-LGL	220	340
	U2	FOLIO	210	330
	U3	A-FLS	206	337
Inch	STMT		216	140
	STMTR		140	216
	LTR		279	216
	A-LTR		280	220
	LTRR		216	279
	A-LTRR		220	280
	LGL		216	356
	11x17		279	432
	U4		267	203
	U5		203	267
	U6		203	330
	U7		268	190
	U8		190	268

Table 7-107 Paper Sizes


A5
A5R
A4
A4R
A3
B5
B5R
B4
U1
U2
U3
SP-1
SP-2
STMT
STMT-R
LTR
LTR-R
LGL
11 17
U4
U5
U6
U7
U8
SP-3
SP-4

A/B rotary label

Inch rotary label

Figure 7-124 Rotary Label

- U Cassette
  The following special papers apply:

  U1 ... FOOLSCAP
  OFFICIO
  A-OFFICIO
  E-OFFICIO
  B-OFFICIO
  A-LGL
  U2 ... FOLIO
  U3 ... A-FLS
  U4 ... G-LTR
  U5 ... G-LTR (R)
  U6 ... G-LGL
  U7 ... K-LGL
  U8 ... K-LGL (R)

- SP-1, -2 (SPECIAL1, 2)
  A specific size selected by the user may be stored in memory in user mode. (A cassette icon may be stored for indication on the control panel. For details, see the User's Manual.)

4. Cassette Size

The upper cassette and the lower cassette are different in size. The upper cassette is capable of holding paper which is B4 or smaller.

The side guide plate (side/rear edge) inside the cassette must be adjusted manually. The side guide plate is not equipped with a sensor, requiring setting of the previously mentioned rotary switch correctly.

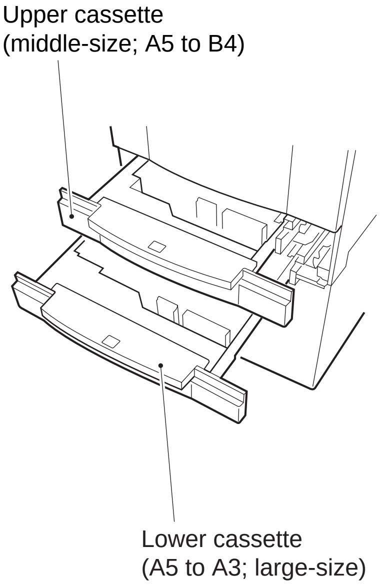

Upper cassette
(middle-size; A5 to B4)
Lower cassette
(A5 to A3; large-size)

Figure 7-125 Upper/Lower Cassette Size

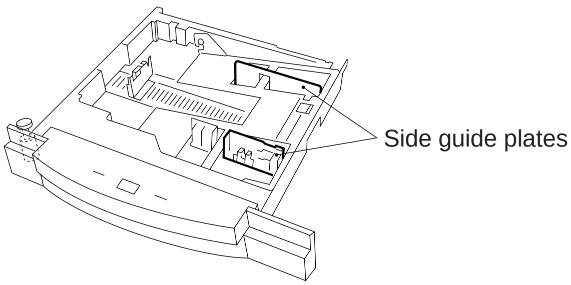

Side guide plates

Figure 7-126 Side Guide Plate

F. Multifeeder

1. Outline

The multifeeder is a mechanism in which a stack of paper placed in it is picked up continuously.

The paper placed on be tray is pushed against the pick-up roller by the paper guide plate. The multifeeder pick-up roll is operated by the drive of the main motor (M1) transmitted by way of the multifeeder pick-up clutch (CL2).

The multifeeder pick-up roller and the separation pad make sure that no more than one sheet of paper is picked up and fed to the registration roller.

The foregoing series of operations is performed for each pick-up.

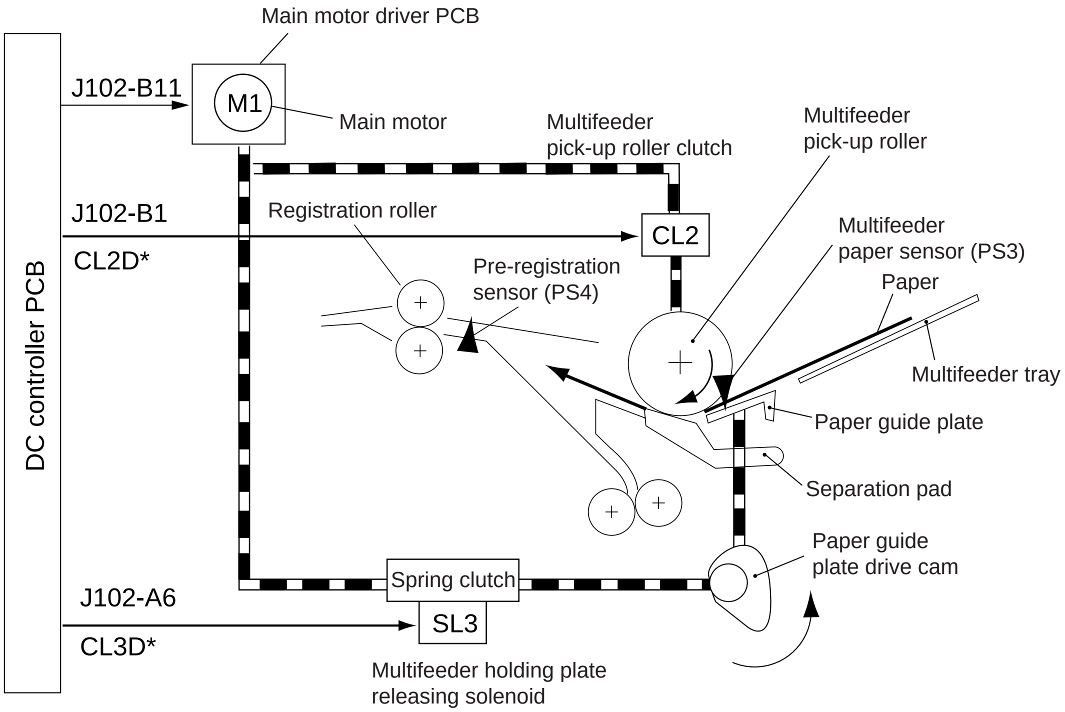

Main motor driver PCB
J102-B11
M1
Main motor
Multifeeder pick-up roller clutch
Multifeeder pick-up roller
J102-B1
CL2D*
Registration roller
CL2
Multifeeder paper sensor (PS3)
Pre-registration sensor (PS4)
Paper
Multifeeder tray
DC controller PCB
Paper guide plate
Separation pad
Paper guide plate drive cam
J102-A6
Spring clutch
SL3
CL3D*
Multifeeder holding plate releasing solenoid

Figure 7-127-1

2. Detecting the Size of Paper (multifeeder)

- Detecting the Width

  The width of paper is detected by the variable resistor (VR1751) operating in conjunction with the movement of the slide guide. The slide guide is set by the user to suit the size of the paper placed on the multifeeder tray.
- Rear/Front Registration

  The rear/front registration for multifeeder pick-up may be adjusted using the screw on the slide guide. For details, see II. "Standards and Adjustments."
- Detecting the Length

  The length of paper is detected in reference to the period of time during which the pre-registration sensor (PS4) remains on. The maximum paper length is identified by 432 x 279 mm (11" x 17").

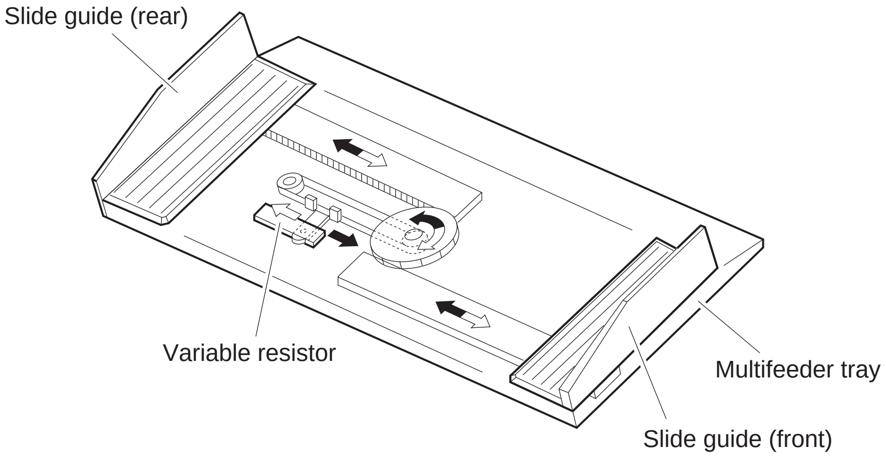


Figure 7-127-2

3. Sequence of Operations (A4, 2 copies)

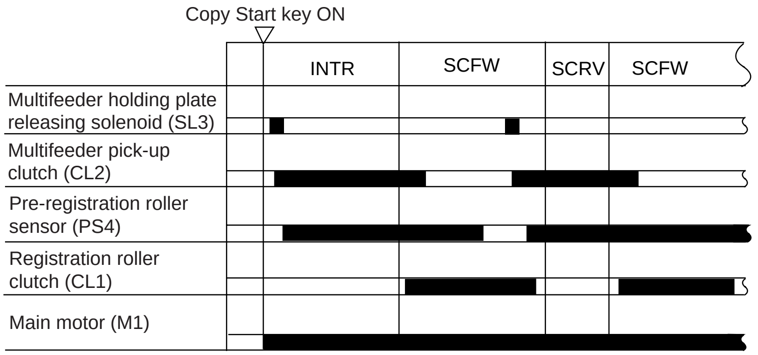
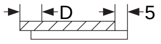
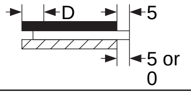
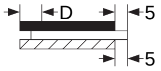
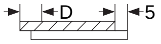
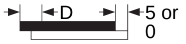
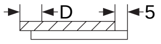
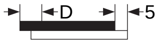
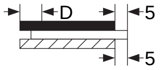
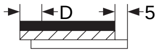
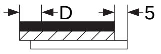
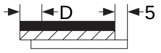


Figure 7-127-3

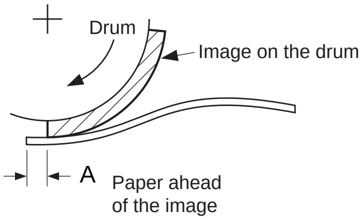
G. Controlling the Registration Roller Clutch

The registration roller clutch (CL1) controls copy paper so that it matches the image on the photosensitive drum at a specific position.

The registration roller turns on at such times as set in service mode (ADJUST>FEED-ADJ>REGIST).

Mode		Copy paper	Shift (mm)	Copy paper on copy tray
Single-sided original → single-sided copy		B	0 to 20 mm; the diagrams assumes 5 mm.	
Single-sided original ↓ Double-sided copy	Copying on 1st side	A		
	Copying on 2nd side	B		
Double-sided origina Double-sided copy	Copying on 1st side	A		
	Copying on 2nd side	B		
Double-sided original ↓ Singe-sided copy	Copying on 1st side	B		
	Copying on 2nd side	B		
Paper separation (single-sided)	Copying on 1st side (left)	B		
	Copying on 2nd side (right)	B		
Page separation ↓ Double-sided copy	Copying on 1st side (left)	A		
	Copying on 2nd side (right)	B		
Signal-sided original ↓ Overlay copy	Copying on 1st side	B		
	Copying on 2nd side	B		
Double-sided original ↓ Overlay copy	Copying on 1st side	B		
	Copying on 2nd side	B		
Page separation ↓ Overlay copy	Copying on 1st side (left)	B		
	Copying on 2nd side (right)	B		

▭ Coy paper ▨ Image area when copying on 1st side ■ Image area when copying on 2nd side Area D: Erased by blank exposure lamp



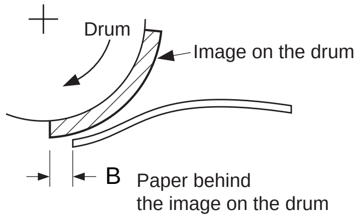


Figure 7-128

H. Making Overlay Copies

The machine makes overlay copies using its image memory, and uses the paper path it uses when making single-sided copies.

For details, see "Image Processing System."

I. Operation

1. Outline

Figure 7-129 shows the paper path the machine uses when making double-sided copies.

In copying on the first side of a double-sided copy, the paper is moved to the left vertical path assembly by the delivery flapper after it has moved through the fixing assembly. When the trailing edge of the paper moves past the reversing assembly inlet sensor (PS6) and reaches a specific position (point of reversal), the duplexing reversing roller starts to rotate in reverse to move the paper to the lower feeding assembly.

When copying on the first side and the last side, the paper is not retained in the lower feeding assembly but is re-picked up.

Otherwise, the paper is retained in the lower feeding assembly until the trailing edge of the next paper moves past the vertical path sensor (PS11); it is then re-picked up after a specific time.

The point of retention is a specific position controller with reference to the output of the re-pick up paper sensor.

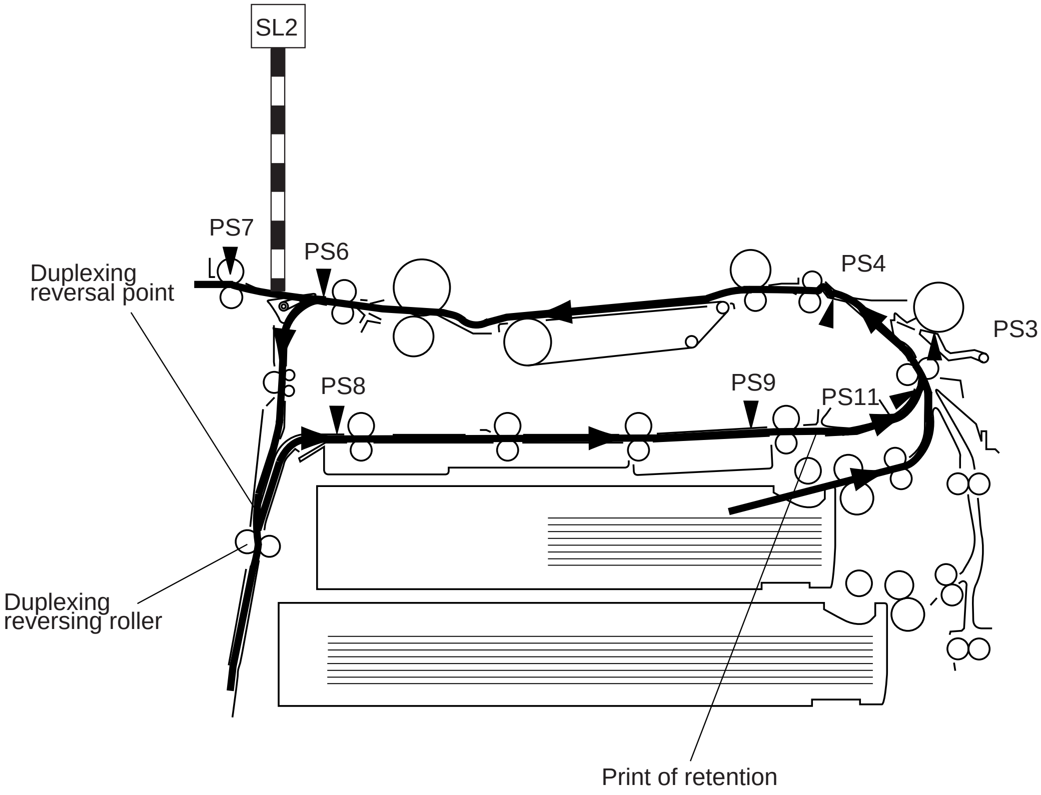


Figure 7-129

2. Sequence of Operations

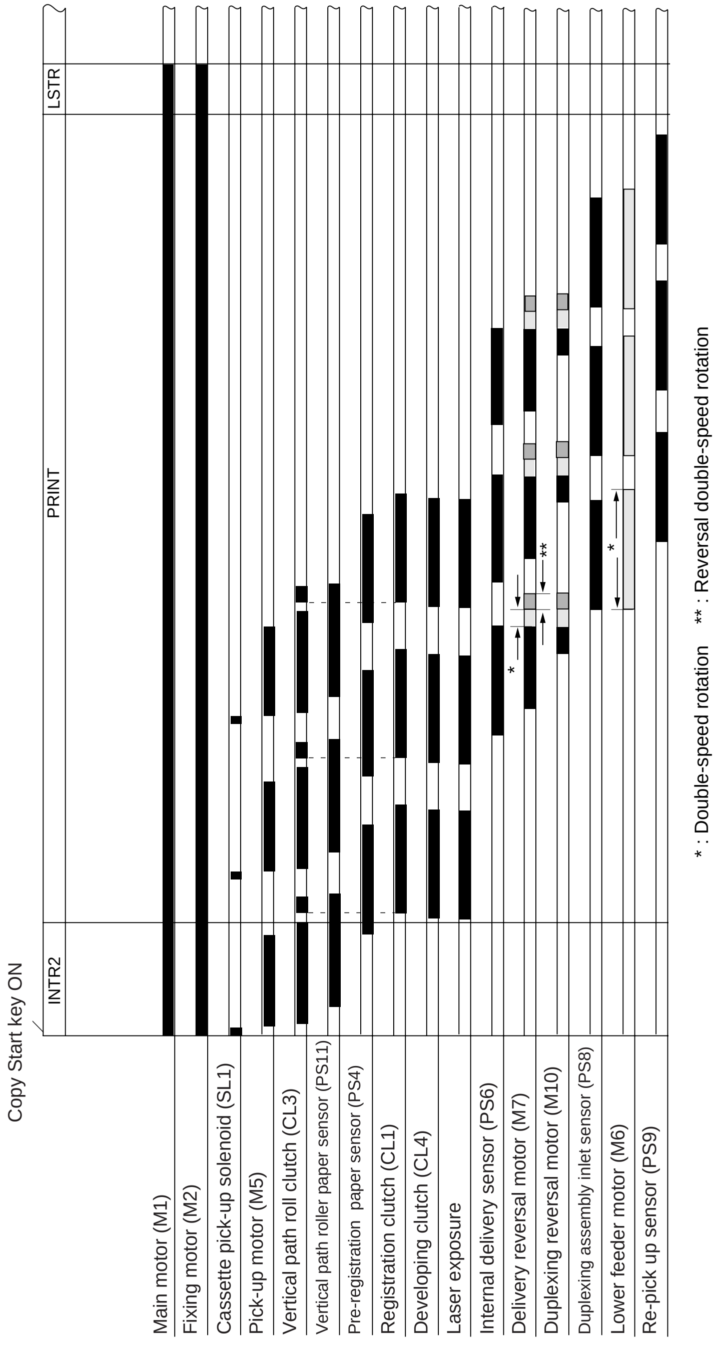

Copy Start key ON
INTR2
PRINT
LSTR
Main motor (M1)
Fixing motor (M2)
Cassette pick-up solenoid (SL1)
Pick-up motor (M5)
Vertical path roll clutch (CL3)
Vertical path roller paper sensor (PS11)
Pre-registration paper sensor (PS4)
Registration clutch (CL1)
Developing clutch (CL4)
Laser exposure
Internal delivery sensor (PS6)
Delivery reversal motor (M7)
Duplexing reversal motor (M10)
Duplexing assembly inlet sensor (PS8)
Lower feeder motor (M6)
Re-pick up sensor (PS9)
*
**
*
* : Double-speed rotation   ** : Reversal double-speed rotation

Figure 7-130 Printer Operation

3. Through-Path Operation

a. Outline

In through path operation, paper is moved to the left vertical path assembly by the delivery flapper after fixing operation; the paper is then switched back and sent to the lower feeding assembly.

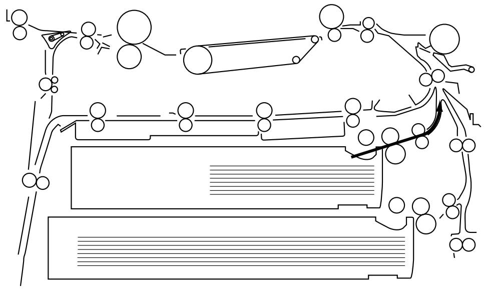
The machine can arrange the order of images read from memory for printing, not having to send and retain paper and, ultimately, speed up double-sided copying.

As many as two sheets of paper may exist at one time between the registration sensor and the lower feeding assembly outlet sensor.

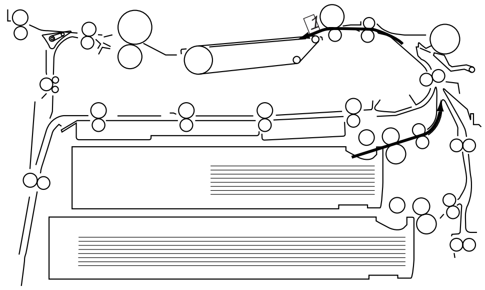
b. Outline of Operations

For instance, the following takes place in through-path operation when making two sets of seven image sides :

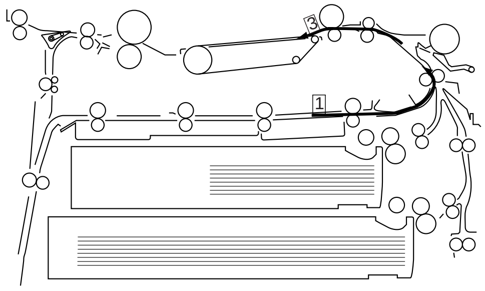
1) The 1st sheet is picked up from the cassette.



2) The 1st image side is copied to the 1st sheet.
The 2nd sheet is picked up.



3) The 3rd image side is copied to the 2nd sheet.
The 1st sheet is switched back in the left feeding path assembly for re-pick up.



4) The 2nd image side is copied to the 1st sheet.
The 3rd sheet is picked up from the cassette.
The 2nd sheet is switched backing the left feeding path assembly, moved into the lower feeding assembly, and kept in wait.

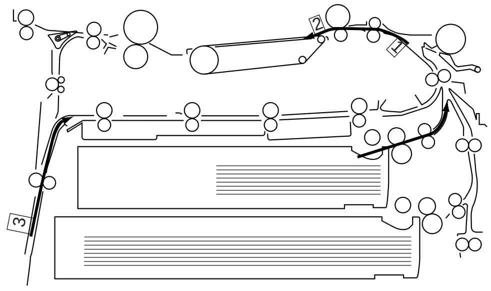


Figure 7-131-1

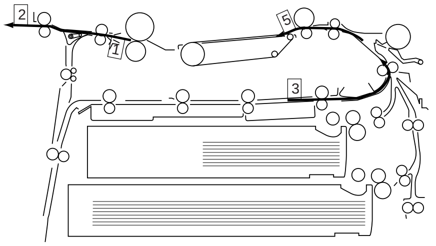
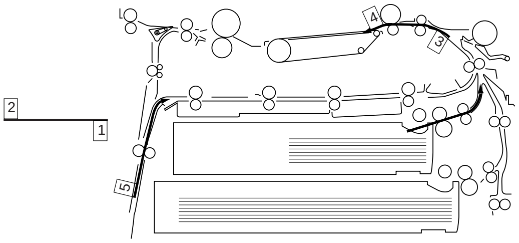
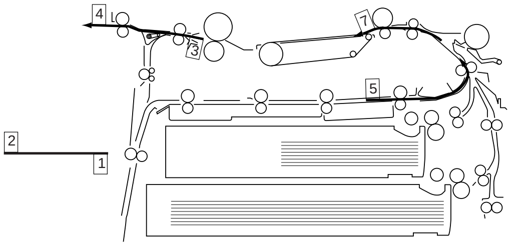
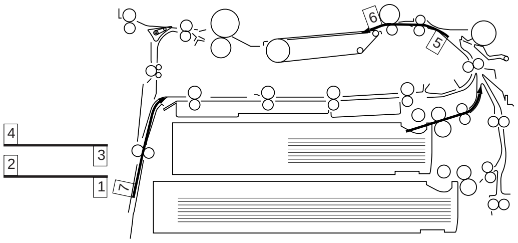
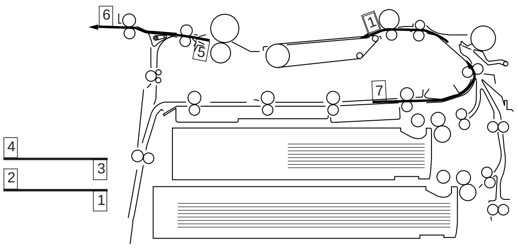
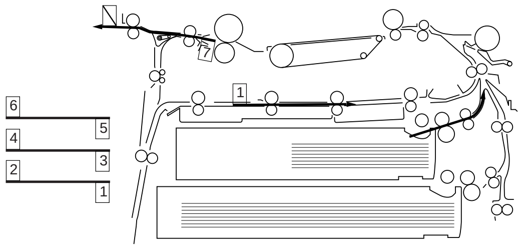
5) The 1st sheet is delivered. The 5th image side is copied on the 3rd sheet.  	6) The 2nd sheet is re-picked up, and the 4th image side is copied. The 4th sheet is picked up from the cassette. The 3rd sheet is switched back in the left vertical path assembly and kept in wait. 
7) The 2nd sheet is delivered. The 7th image side is copied on the 4th sheet.  	8) The 3rd sheet is re-picked up, and the 6th image side is copied. The 5th sheet is picked up from the cassette. The 4th sheet is switched back in the left vertical path assembly and is kept in wait. 

Figure 7-131-2

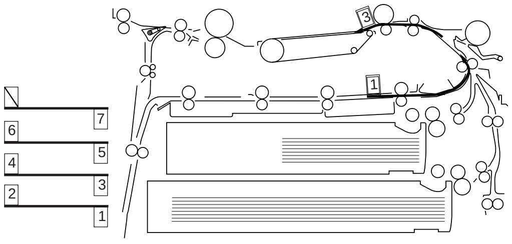
9) The 3rd sheet is delivered.
The 1st image side of the second set is copied on the 5th sheet.



10) The 4th sheet is delivered.
The 6th sheet is picked up from the cassette.
The 5th sheet is switched back in the left vertical path assembly and is kept in wait in the lower feeding assembly.



11) The 3rd image side of the 2nd set is copied on the 6th sheet.
The 5th sheet is re-picked up.



12) The 2nd image side is copied to the 5th sheet of the 2nd set.
The 7th sheet is picked up from the cassette.
The 6th sheet is re-picked up from the left-vertical path assembly and is kept in wait in the left feeding assembly.

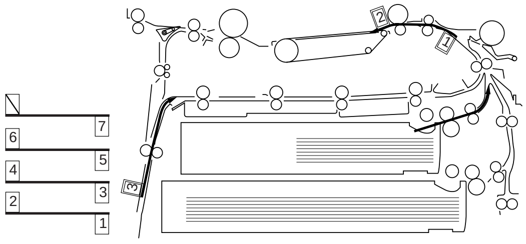
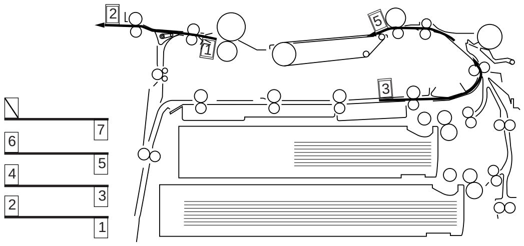
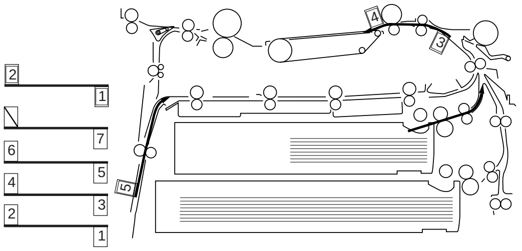


Figure 7-131-3

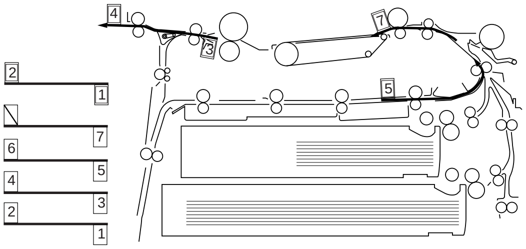
13) The 5th sheet is delivered.
The 5th image side is copied on the 7th sheet of the 2nd set.
The 6th sheet is re-picked up.



14) The 4th image side is copied on the 6th sheet of the 2nd set.
The 8th sheet is picked up from the cassette.
The 7th sheet is switched back in the left vertical path assembly and is kept in wait in the lower feeding assembly.



15) The 6th sheet is delivered.
The 7th image side is copied on the 8th sheet of the 2nd set.
The 7th sheet is re-picked up.



16) The 6th image side is copied on the 7th sheet of the 2nd set.
The 8th sheet is switched back in the left vertical path assembly, moved through the lower feeding assembly, and is re-picked up.

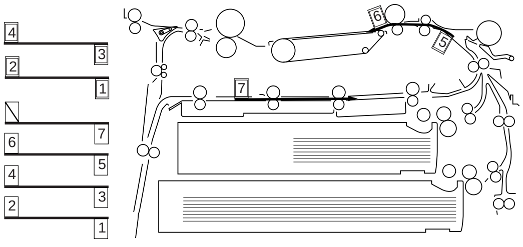
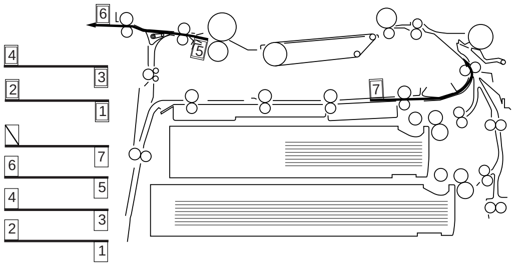


Figure 7-131-4

17) The 7th sheet is delivered.


6
5
7
4
3
2
1
7
6
5
4
3
2
1

18) The 8th sheet is delivered.

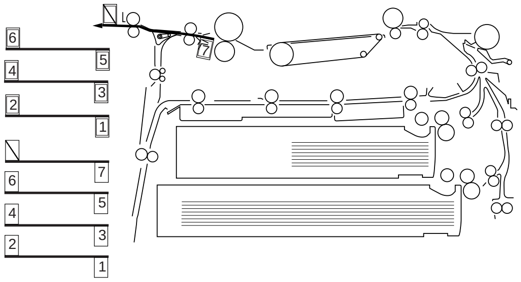

7
6
5
4
3
2
1
7
6
5
4
3
2
1

Figure 7-131-5

4. Detecting the Point of Horizontal Registration

a. Outline

- Paper is picked up from the lower feeding assembly without positioning it in the rear/front direction, requiring detection of displacement while it is being moved. To this end, paper is checked for horizontal registration when it is moved from the lower feeding assembly.
- The rear/front registration detection mechanism is located near the vertical path roller assembly, and consists of a horizontal registration sensor (PS10) and a horizontal registration shift motor (M9).
- The horizontal registration sensor shift motor (M9) is used to move the horizontal resignation sensor (PS10), and it detects the edge of paper for synchronization with the point of laser exposure.

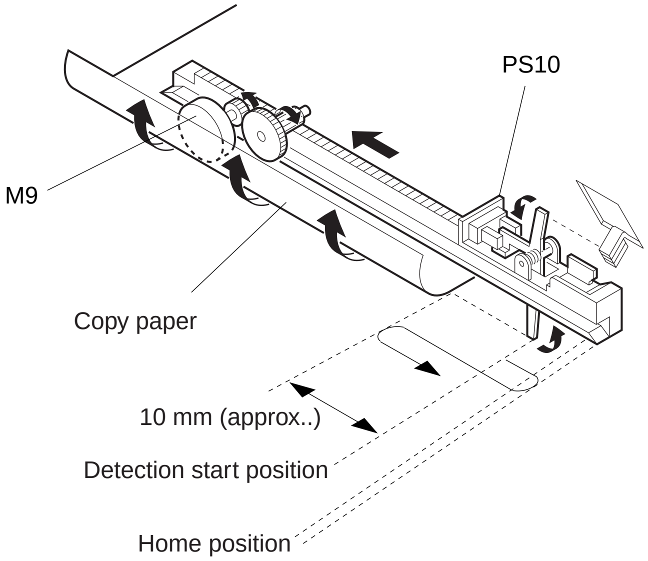


Figure 7-132

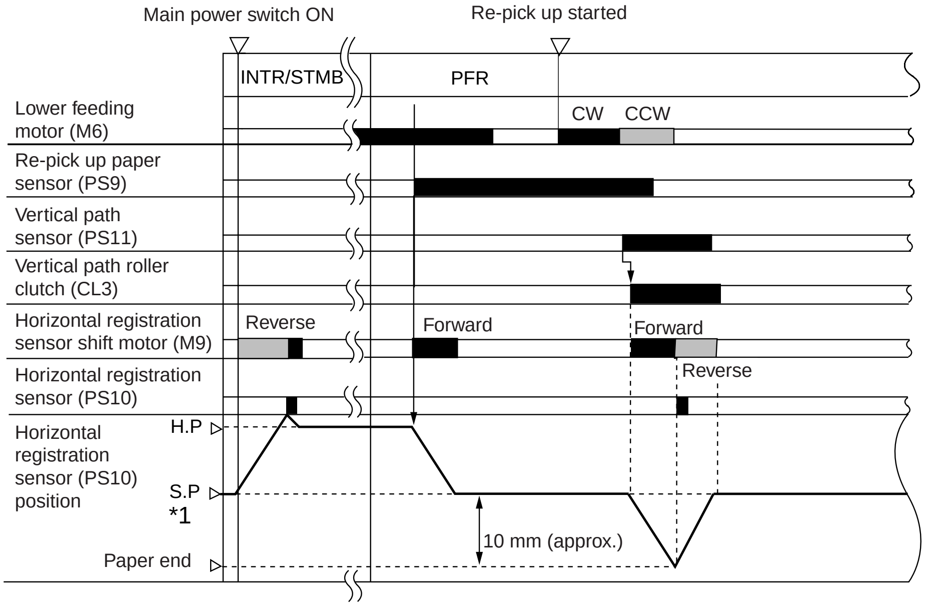
b. Operations

The horizontal registration sensor (PS10) checks home position when 24 VDC is supplied (i.e., when the main power switch is turned on, the front cover is closed); the sensor starts to move when paper is fed to the lower feeding assembly, and remains in wait at the detection start position.

When paper from the lower feeding assembly reaches the vertical path paper sensor (PS11), the horizontal registration sensor shift motor (M9) turns on, and the horizontal registration sensor (PS10) starts to check the trailing edge of paper (each time pick-up occurs in the lower feeding assembly).

The detection start position differs according to the size of paper, and it is about 10 mm from the trailing edge of paper (assumed to move in an ideal path). The detection start position is determined by the cassette size and the slide guide of the multifeeder.

Figure 7-133 shows the sequence of operations used when detecting the rear/front registration.


Main power switch ON
Re-pick up started
INTR/STMB
PFR
Lower feeding motor (M6)
CW
CCW
Re-pick up paper sensor (PS9)
Vertical path sensor (PS11)
Vertical path roller clutch (CL3)
Horizontal registration sensor shift motor (M9)
Reverse
Forward
Forward
Reverse
Horizontal registration sensor (PS10)
Horizontal registration sensor (PS10) position
H.P
S.P
*1
Paper end
10 mm (approx.)

*1: When the light -blocking plate is not present, detects the edge of paper and contact of the sensor against the rear.

*2: SP differs since different paper sizes have different paper end positions.

HP: Horizontal sensor home position.

SP: Horizontal sensor detection start position.

Figure 7-133

Figure 7-134 and Table 7-108 show the electrical parts associated with the detection of rear/ front registration.

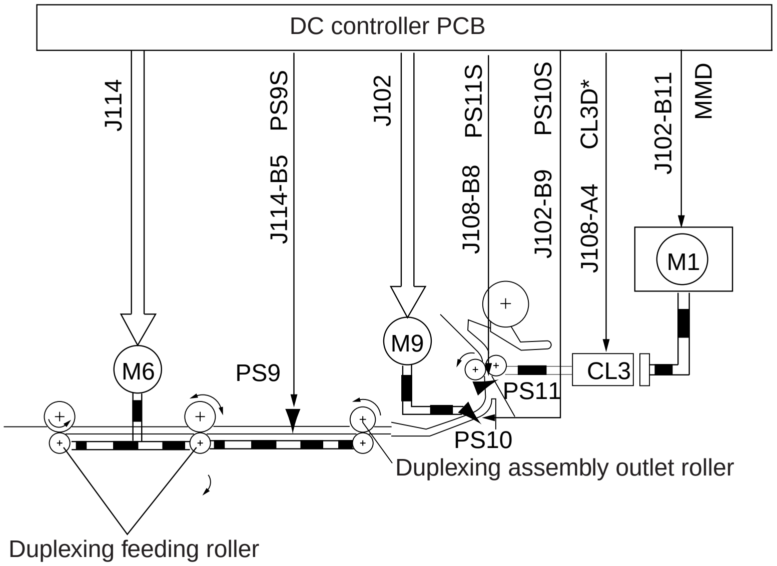

DC controller PCB
J114
J114-B5
PS9S
J102
J108-B8
PS11S
J102-B9
PS10S
J108-A4
CL3D*
J102-B11
MMD
M1
M9
M6
PS9
CL3
PS11
PS10
Duplexing assembly outlet roller
Duplexing feeding roller

Figure 7-134

	Electrical parts
M1	Main motor
M6	Lower feeder roller
M9	Horizontal registration sensor shift motor
LC3	Vertical path clutch
PS11	Vertical path sensor
PS9	Re-pick up sensor
PS10	Horizontal sensor

Table 7-108

c. Adjusting the Horizontal Registration (service mode)

If displacement occurs in the rear/front direction when picking up the second side of an overlay/double-sided copy, adjust the horizontal registration in service mode (ADJUST>FEED-ADJ>ADJ-REFE).

In this mode, the position of the horizontal registration sensor is moved virtually in memory to move the point of laser exposure. It is not to move the sensor position mechanically.

- If the image is displaced toward the rear, decrease the setting.

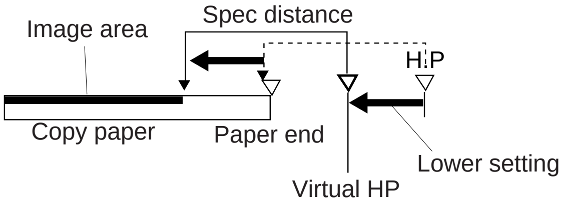


Image area
Spec distance
H.P
Copy paper
Paper end
Lower setting
Virtual HP

Figure 7-135

- If the image is displaced to the front, increase the setting.

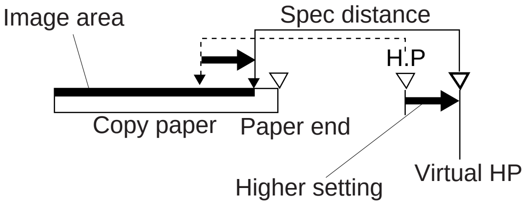


Image area
Spec distance
H.P
Copy paper
Paper end
Higher setting
Virtual HP

Figure 7-136

J. Delivery Assembly

1. Outline

The machine provides two ways of delivery selected in service mode:

- a. Face down
- b. Face up

a. Face-Down Delivery

In face-down delivery, the copied side or the odd-number side of a double-sided copy is delivered facing down.

After being moved through the fixing assembly, the paper is controlled by the delivery flapper and fed to the left vertical path assembly. A specific time after the trailing edge of the paper moves past the revering assembly inlet sensor (PS6), the reversal feeding roller 1 starts to rotate in reverse. At this time, the delivery flapper solenoid (SL2) remains off, and the paper is fed to the delivery assembly for face-down delivery.

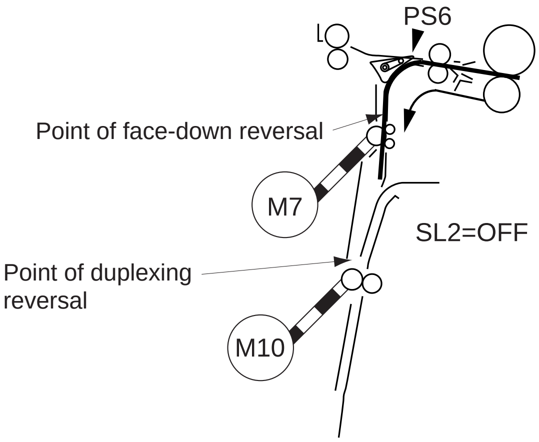


Figure 7-137

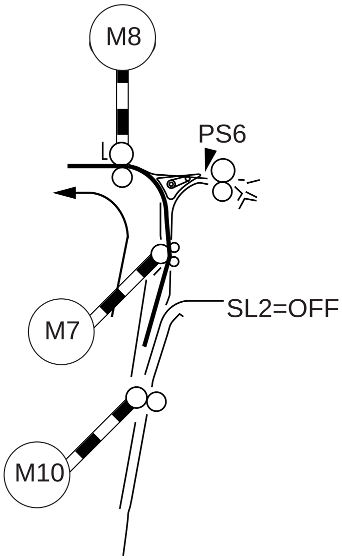


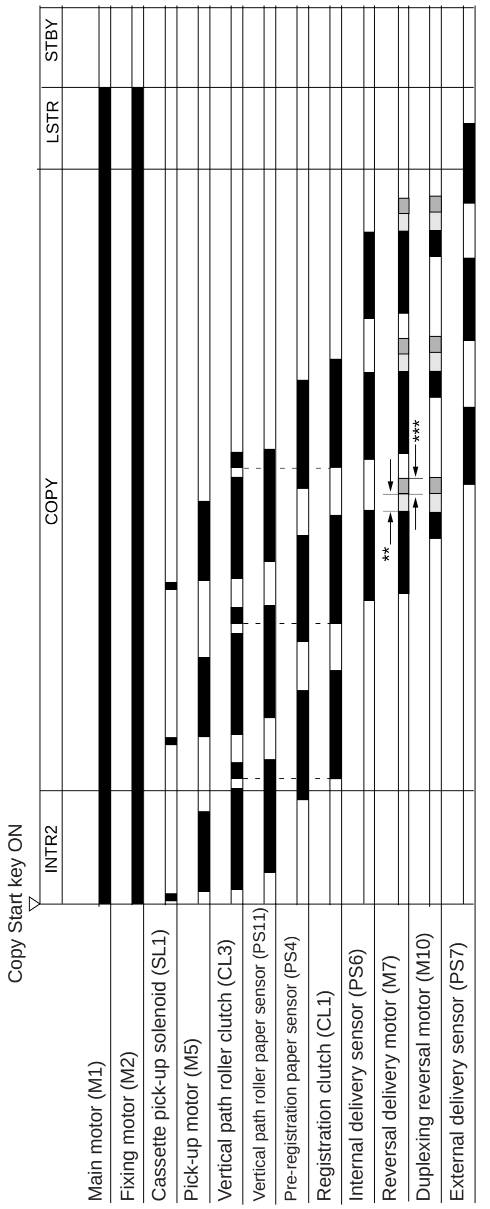
Figure 7-138

b. Face-Up Delivery

In face-up delivery, the copied side or the odd-number side of a double-sided copy is delivered facing up. The delivery flapper solenoid (SL2) is on.

2. Sequence of Operations

Figure 7-139 shows the sequence of operations used for face-down delivery.



**Double speed rotation ***Reversal double-speed rotation

Figure 7-139

Reference:

Normally, the delivery flatter solenoid (SL2) remains off, and it turns on when paper is fed from the fixing assembly to the delivery assembly.

Copy paper	Solenoid
Fixing assembly → left vertical path assembly	OFF
Fixing assembly → delivery assembly	ON
Left vertical path assembly → delivery assembly	OFF

Table 7-109

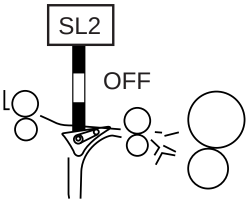


Figure 7-140 Delivery Flapper Solenoid Off

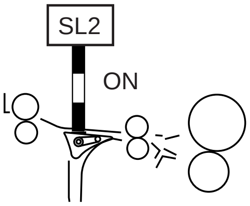


Figure 7-141 Delivery Flapper Solenoid On

K. Detecting Jams

1. Outline

As man as nine paper sensors are used (Figure 7-142) to make sure that paper is moving through the machine normally.

The presence/absence of paper is checked at such times as programmed in the microprocessor (DC controller) on the image processor PCB; upon detection of a jam, the main motor is stopped and a Jam message will be indicated on the control panel.

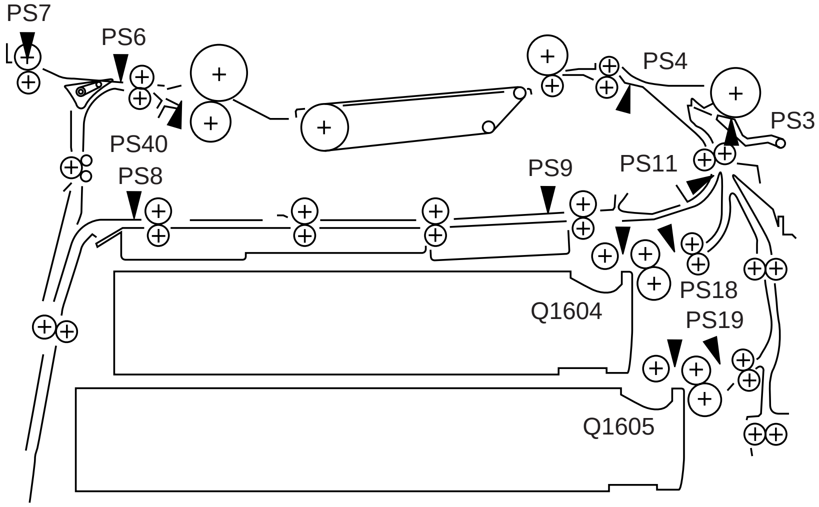


Figure 7-142

	Name	Signal	Pin No.*
PS3	Multifeeder paper sensor	PS3S	J108-B2
PS4	Pre-registration paper sensor	PS4S	J108-B11
PS6	Reversing assembly inlet sensor	PS6S	J106-2
PS7	Delivery sensor	PS7S	J107-2
PS8	Duplexing assembly inlet sensor	PS8S	J114-B2
PS9	Vertical path paper sensor	PS9S	J114-B5
PS11	Re-pick up paper sensor	PS11S	J108-B8
PS18	Cassette 1 pick-up sensor	PS18S	J108-A17
PS19	Cassette 2 pick-up sensor	PS19S	J108-A18
PS40	Fixing assembly outlet sensor	PS40S	J114-A2

* Pin No. of the signal line on the DC controller PCB.

Table 7-110

2. Types of Jams

The microprocessor identifies the following conditions as Jams:

a. Delay Jam

Paper does not reach the sensor within a specific period of time (i.e., the sensor remains off).

b. Stationary jam

The sensor detects paper, but the paper does not leave the sensor within a specific period of time (i.e., the sensor does not turn off).

c. Residual Jam

Paper exists over the sensor at time of power-on (i.e., the sensor turns on).

Caution:

The machine also identifies a jam when the front door, right door, or the delivery door is opened or the cassette is slid out during copying operation.

3. Sequence of Operations

a. Pick-Up Delay jam

Paper turns on the vertical path clutch (CL3), but it does not reach the vertical path paper sensor (PS11) within a specific period of time.

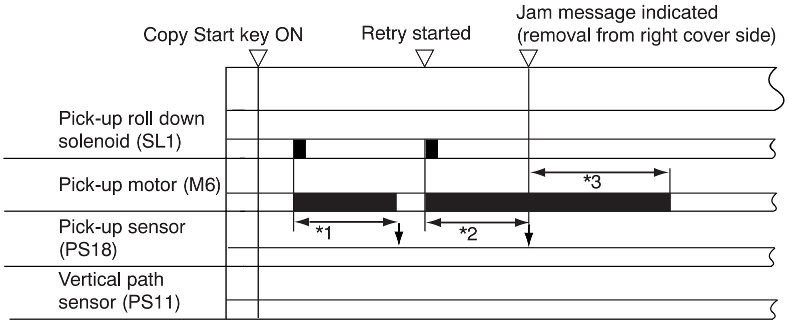

Copy Start key ON
Retry started
Jam message indicated (removal from right cover side)
Pick-up roll down solenoid (SL1)
Pick-up motor (M6)
Pick-up sensor (PS18)
Vertical path sensor (PS11)
*1
*2
*3

Figure 7-143 Pick-Up Delay Jam

b. Pre-Registration Sensor Delay Jam (multifeeder pick-up)

Paper turns on the multifeeder pick-up clutch (CL2), but it does not reach the pre-registration sensor (PS4) within a specific period of time (PS4).

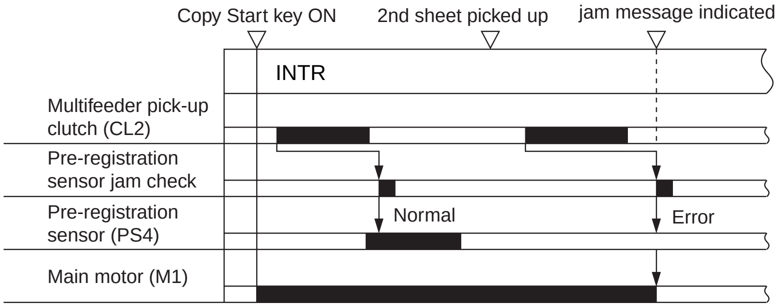

Copy Start key ON
2nd sheet picked up
jam message indicated
INTR
Multifeeder pick-up clutch (CL2)
Pre-registration sensor jam check
Pre-registration sensor (PS4)
Normal
Error
Main motor (M1)

Figure 7-144

c. Pre-Registration Sensor Delay Jam

Paper turns on the vertical path roll clutch (CL3), but it does not reach the pre-registration sensor (PS4) within a specific period of time.

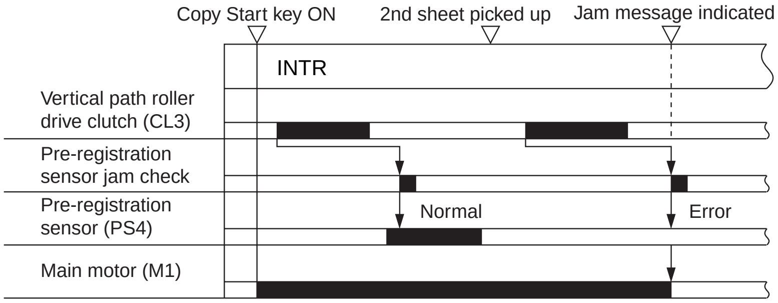

Copy Start key ON
2nd sheet picked up
Jam message indicated
INTR
Vertical path roller drive clutch (CL3)
Pre-registration sensor jam check
Pre-registration sensor (PS4)
Normal
Error
Main motor (M1)

Figure 7-145 Pre-Registration Roller Sensor Delay Jam

e. Fixing Assembly Paper Sensor Delay Jam

Paper moves past the registration clutch (CL1), but does not reach the reversing assembly inlet sensor (PS6) within a specific period of time.

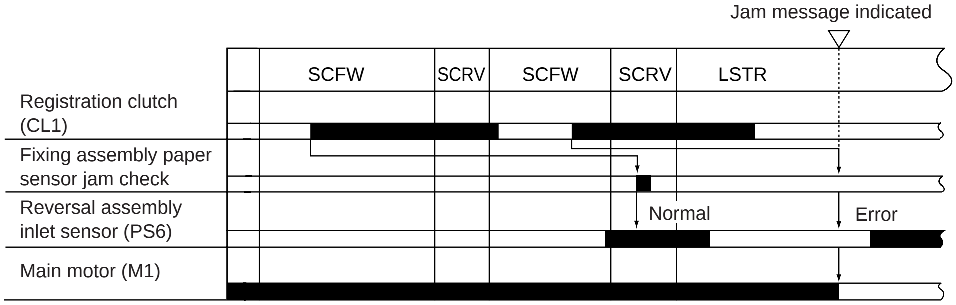


Figure 7-146 Fixing Assembly Paper Sensor Delay Jam

f. Delivery Sensor Delay Jam

Paper moves past the reversing assembly inlet sensor (PS6), but doe not reach the delivery sensor (PS7) within a specific period of time.

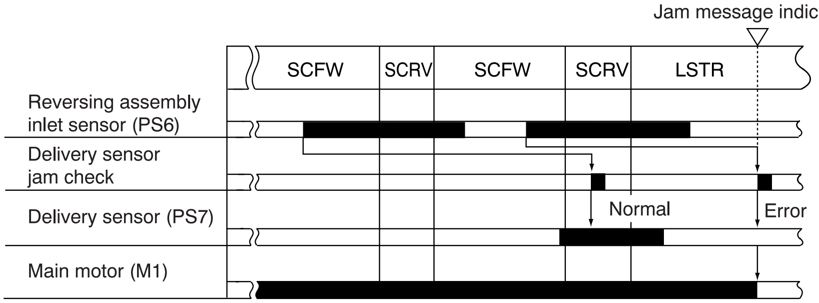


Figure 7-147 Delivery Delay Jam

g. Delivery Sensor Stationary jam

Paper turns on the delivery sensor (PS7), but does not move past the delivery sensor within a specific period of time.

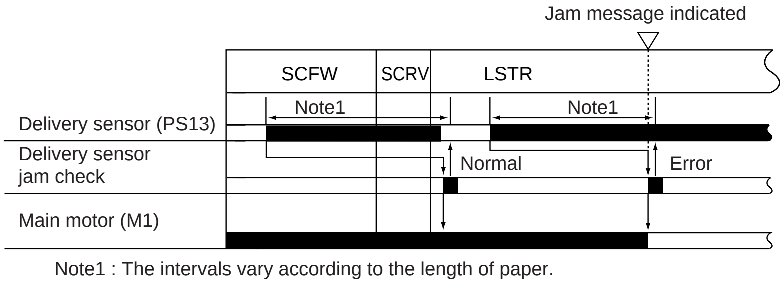

Jam message indicated
SCFW
SCRV
LSTR
Note1
Note1
Delivery sensor (PS13)
Delivery sensor jam check
Normal
Error
Main motor (M1)
Note1 : The intervals vary according to the length of paper.

Figure 7-148 Delivery Sensor Stationary Jam

h. Lower Feeding Assembly Inlet Sensor Delay Jam (overlay copying)

Paper moves past the reversing assembly inlet sensor (PS6), but does not reach the duplexing assembly inlet sensor (PS12) within a specific period of time.

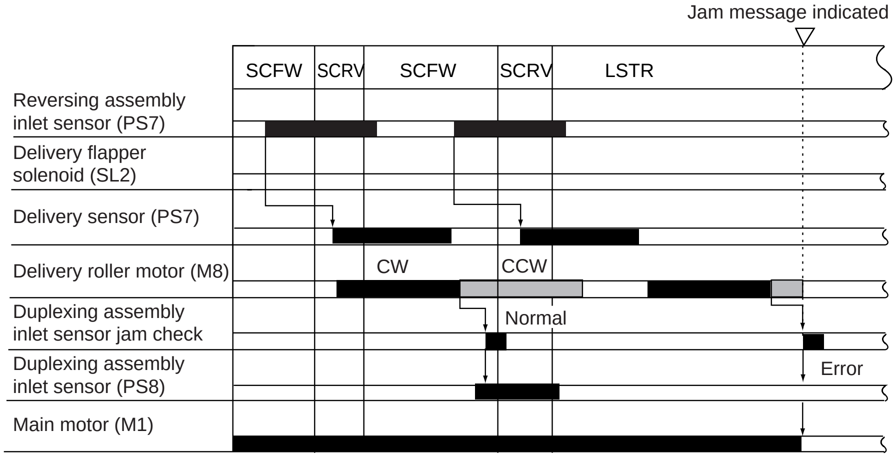

Jam message indicated
SCFW
SCRV
SCFW
SCRV
LSTR
Reversing assembly inlet sensor (PS7)
Delivery flapper solenoid (SL2)
Delivery sensor (PS7)
Delivery roller motor (M8)
CW
CCW
Duplexing assembly inlet sensor jam check
Normal
Duplexing assembly inlet sensor (PS8)
Error
Main motor (M1)

Figure 7-149 Lower Feeding Assembly Inlet Delay Jam

i. Duplexing Assembly Re-Pick Up Sensor Delay Jam

Paper moves past the duplexing assembly inlet sensor (PS8), but does not reach the re-pick up sensor (PS9) within a specific period of time.

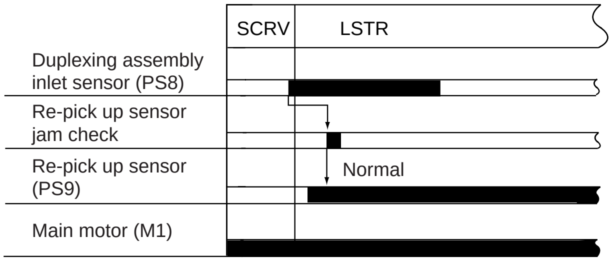

SCRV
LSTR
Duplexing assembly inlet sensor (PS8)
Re-pick up sensor jam check
Re-pick up sensor (PS9)
Normal
Main motor (M1)

Figure 7-150 Re-Pick Up Delay Jam (normal)

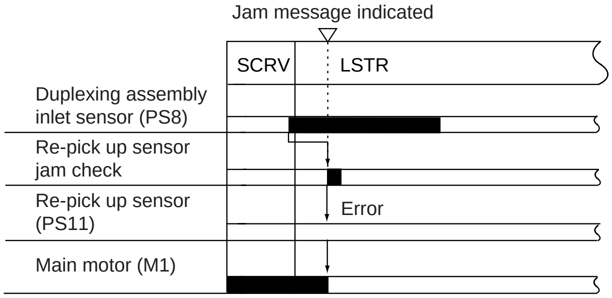

Jam message indicated
SCRV
LSTR
Duplexing assembly inlet sensor (PS8)
Re-pick up sensor jam check
Re-pick up sensor (PS11)
Error
Main motor (M1)

Figure 7-151 Re-Pick-Up Delay Jam (error)

j. Fixing assembly Outlet Sensor Stationary Jam

Paper moves past the pre-registration paper sensor (PS4), but does not reach the internal delivery sensor (PS6) within a specific period of time or paper is detected at power time.

4. Jam History

The machine keeps a record of jams that occurred in it, and the history is checked in service mode.

Jam history	DISPLAY>JAM
Jam history reset	FUNCTION>JAM-HIST

Table 7-111 Jam History in Service Mode

The machine also keeps the following data in response to a jam:

- Remaining number of copies to make
- Selected copying mode

Using these data items, the machine runs recovery mode to make the remaining number of copies after jam removal.

Reference:

If the message "Put Originals Back, and Press the Copy Start Key" appears on the control panel, put back the original in the feeder.

II. DISASSEMBLY/ASSEMBLY

Be sure to observe the following when disassembling/assembling the parts:

1. ⚠ The power plug must be disconnected before starting the work.
2. The steps used to disassemble the parts must be reversed when assembling them, unless otherwise noted.
3. The screws must be identified by type (length, diameter) and location.
4. The washer used with a specific mounting screw (e.g., for grounding wire and varistor) must not be left out to ensure electric conductivity.
5. The screws that are paint-locked in place must not be removed during disassembly work.
6. The machine must not be operated with any of its parts removed, unless otherwise required.

A. Pick-Up Assembly

1. Removing the Pick-Up Assembly

1) Remove the cassette from the copier.
2) Remove the lower right cover and the right cover.
3) Pull out the roll [1] of the multi tray cover.
4) Free the cable of the right door [2] from the hook [3]; then, detach the right door.

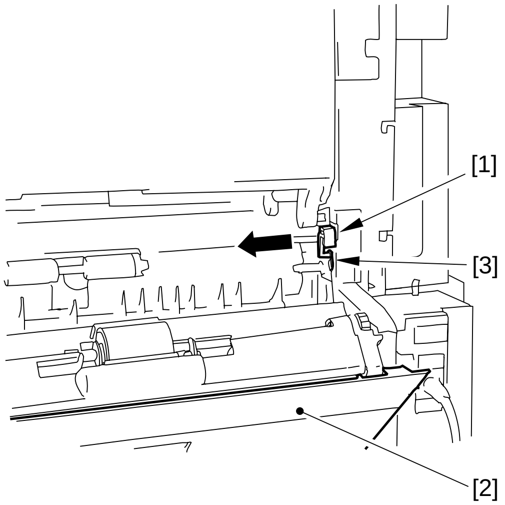


Figure 7-201

5) Disconnect the connector [4] of the pick-up assembly and remove the grounding screw [5].
6) Remove the four screws [7], and detach the pick-up assembly [6].

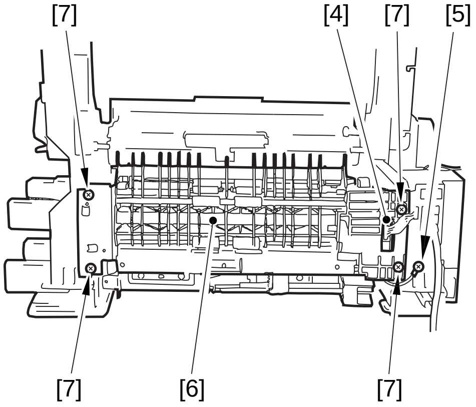


Figure 7-202

2. Removing the Pick-Up/Feeding/Separation Roller

1) Slide out the cassette.
2) Holding the knob [1], pull out the roller in its axial direction.

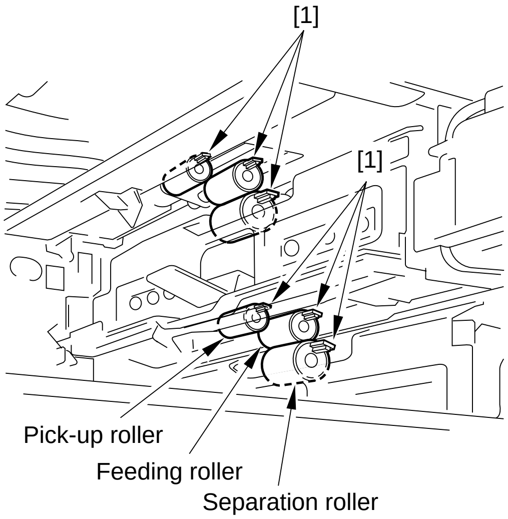


Figure 7-203

3. Mounting the Pick-Up/Feeding/Separation Roller

1) Holding the knob, push in the roller until a click is heard.

4. Removing the Pick-Up Motor/ Vertical Path Roller Clutch

1) Remove the pick-up unit.
2) Remove the two screws, and disconnect the five connectors [2]; then, while opening the two claws [3], remove the two pick-up PCB [4].

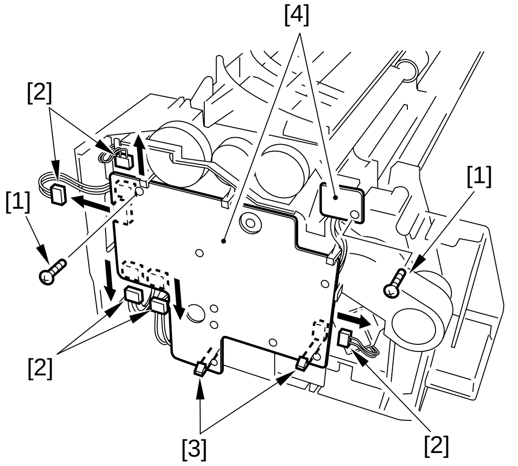


Figure 7-204

3) Remove the coil spring [5] and two screws [6]; then, detach the leaf spring [7] and the solenoid.

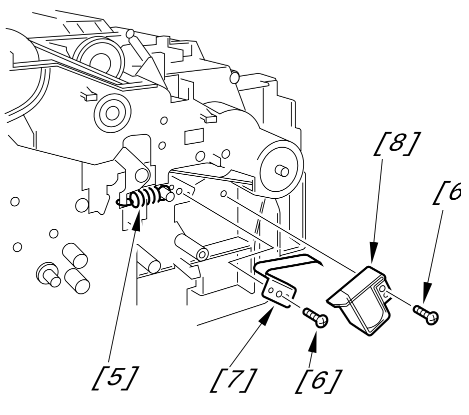
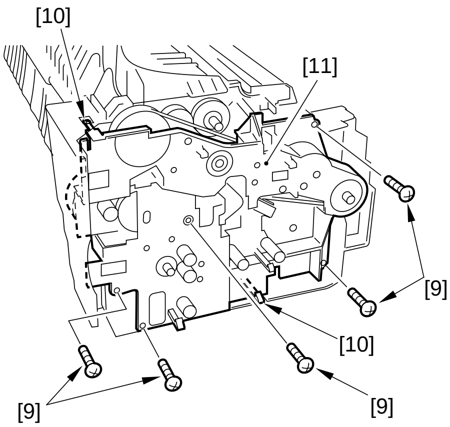


Figure 7-205

4) Remove the five screws [9]; then, while freeing the two claws [10], detach the frame lid [11].



5) Remove the two screws [12], and detach the motor mount [13].

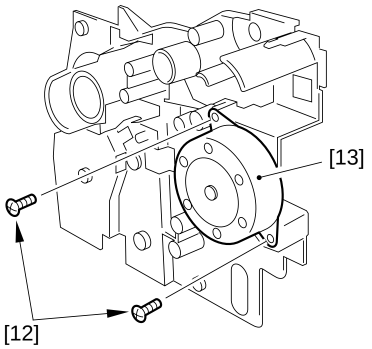


Figure 7-206

6) Remove the two screws [14], and detach the pick-up motor (M5) [15].

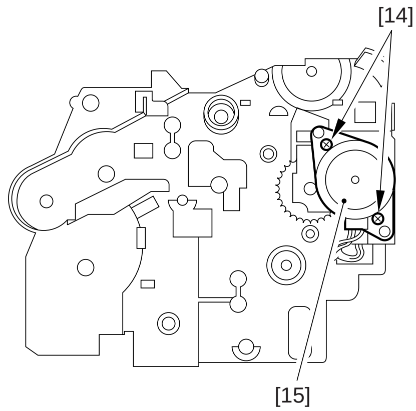


Figure 7-207

7) Remove the flange [15], belt [16], and gear [17].

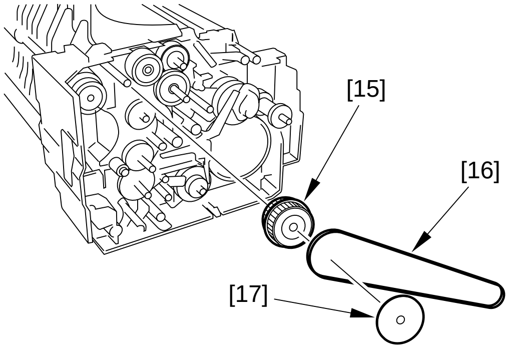


Figure 7-208

8) Remove the grip ring [18], and detach the vertical path roller clutch (CL3) [19].

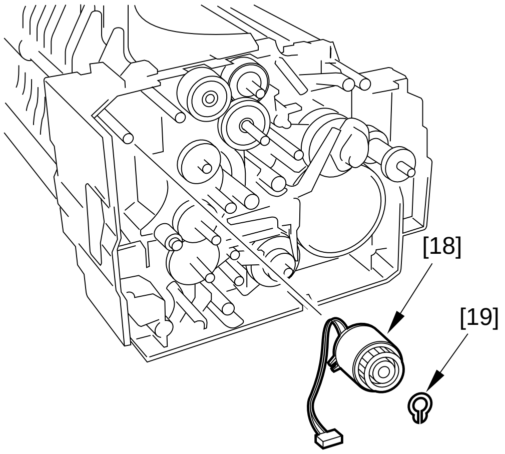


Figure 7-209

5. Adjusting the Rear/Front Registration

Check to make sure that the margin along the image front on paper picked up from each cassette is 2.5 ±1.5 mm.

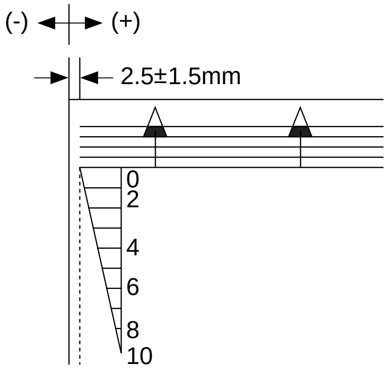


Figure 7-210

If not as indicated, perform the following steps:

1) Slide out the cassette of the holder to be adjusted.
2) Remove the two screws, and detach the horizontal registration mount [1].

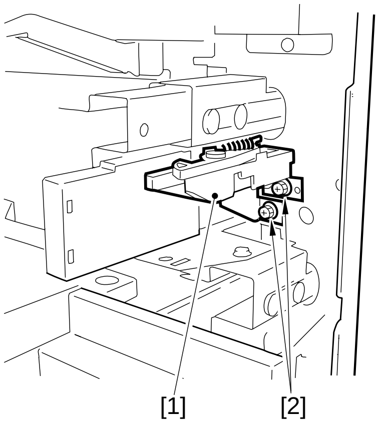


Figure 7-211

3) Loosen the hex screw, and move the horizontal registration plate to the rear/font.

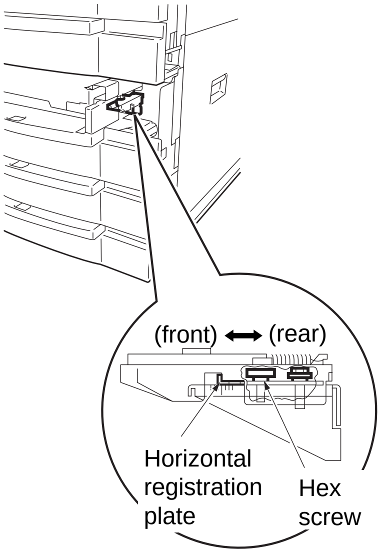
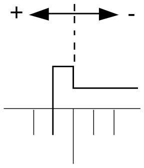


Figure 7-212

> **Caution:**
> When adjusting the horizontal registration plate, try to match the inside of the L shape against the appropriate gradation of the scale.
>
> 
>
>
> **Figure 7-213**

B. Multifeeder

1. Removing the Multifeeder Unit

1) Remove the right cover.
2) Disconnect the connector [1].

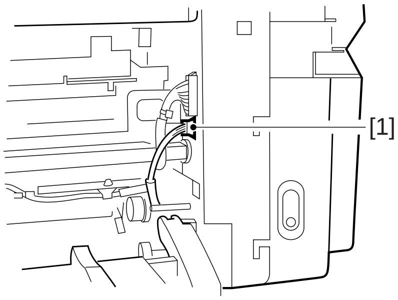


Figure 7-214

3) Close the multifeeder, and open the right door; then, pull out the rolls. (Both left and right rolls are of the same shape.)

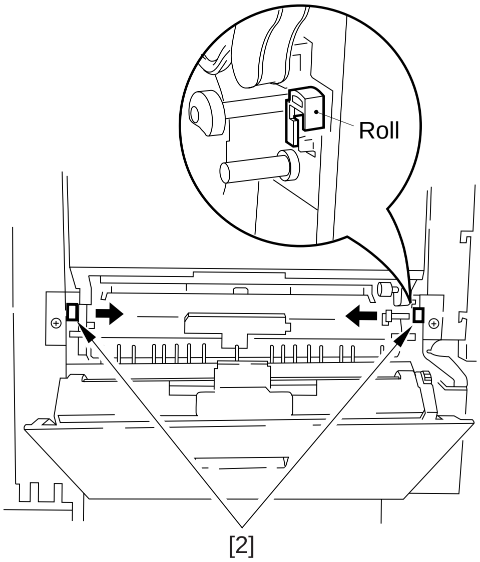


Figure 7-215

4) Pull the multifeeder to the front to remove.

Reference:
When mounting the multifeeder connector cover, match its top an then push its bottom from below.

2. Removing the Multifeeder Pick-Up Roller

1) Pull out the roll [1] of the multifeeder cover.
2) Free the cable from the hook [3]; then, detach the right door [2].

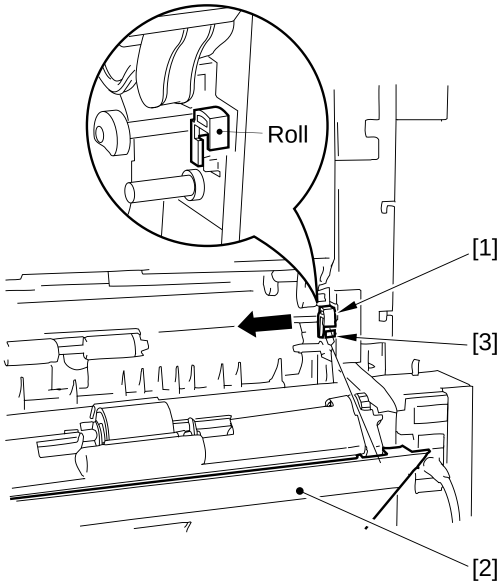


Figure 7-216

3) Remove the snap-on bushing [2], and shift the roller shaft [3] in the direction of the arrow.
4) Remove the stop shaft [4], and remove the multifeeder pick-up roller [5].

Caution:
1. Take care not to drop the pin fitted at the rear of the multifeeder pick-up roller.
2. Take care not to deform the grounding plate found at the rear of the roller shaft.

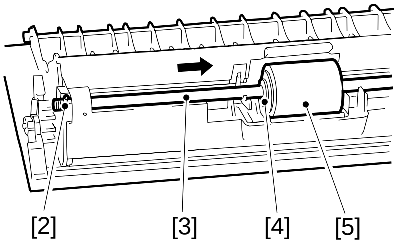


Figure 7-217

3. Removing the Separation Pad

1) Remove the right door.
2) Remove the multifeeder pick-up roller.
3) While pushing the end [1] of the right door in the direction of A, move the rear of the separation pad cover [2] in the direction of B to remove.

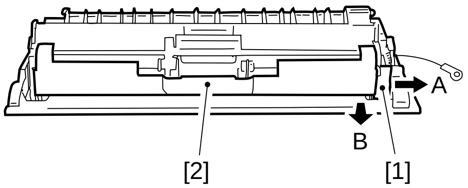


Figure 7-218

4) Free the hook [4] of the lever [3], and move it in the direction of the arrow to remove.

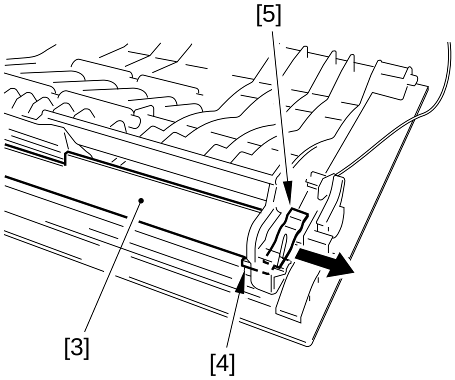


Figure 7-219

5) Remove the multifeeder holding plate retaining plate [5], and detach the separation pad [6].

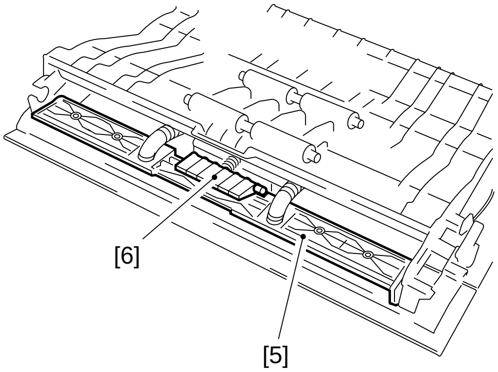


Figure 7-219-1

4. Orientation of the Multifeeder Pick-Up Roller

When mounting the multifeeder pick-up roller [1], be sure to orient it so that the side with a cross [2] on the collar is toward the rear.

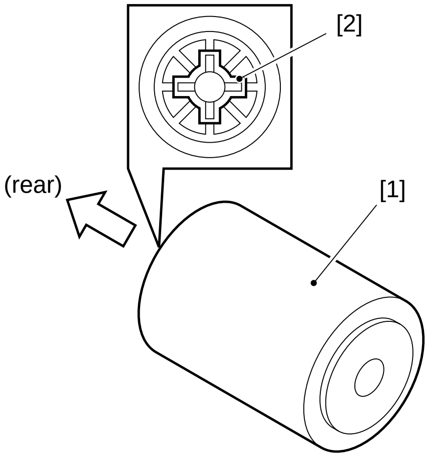


Figure 7-220

5. Orientation of the Multifeeder Paper Guide Cam

Make adjustments so that the paper guide plate cam is as indicate in the figure when the solenoid plate is in contact with the claw of the control ring.

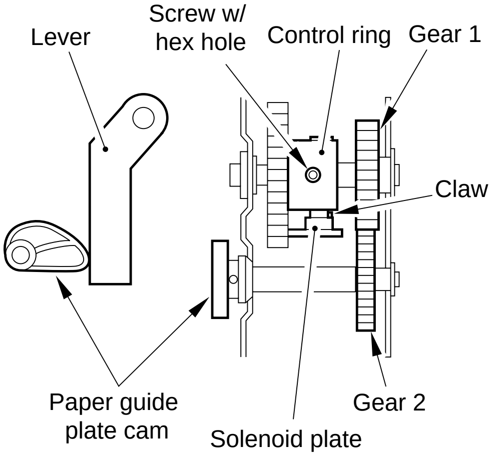

Lever
Screw w/
hex hole
Control ring
Gear 1
Claw
Paper guide
plate cam
Solenoid plate
Gear 2

Figure 7-221

6. Attaching the Timing Belt to the Multifeeder

1) Butt the side guide plates of the multifeeder against both ends (A; open state).
2) Move the slide volume to the center (in the direction of B), and attach the timing belt to the pulley.

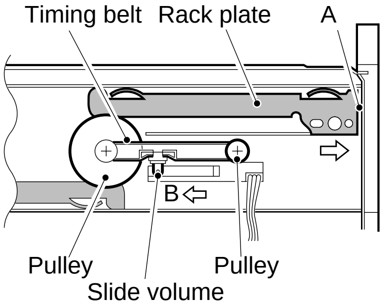

Timing belt
Rack plate
A
B
Pulley
Pulley
Slide volume

Figure 7-222

7. Adjusting the Rear/Front Registration

Make a copy in Direct, and check to make sure that the margin along the front of the image is 2.5 ±1.5 mm.

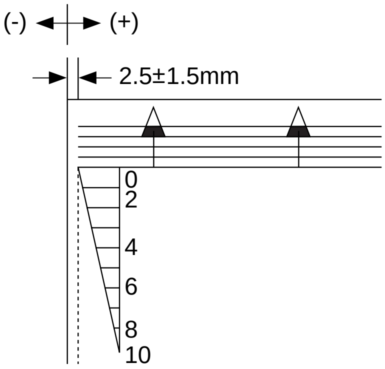

(-)
(+)
2.5±1.5mm
0
2
4
6
8
10

Figure 7-223

If not as indicated, move the multifeeder tray [1] to make adjustments.

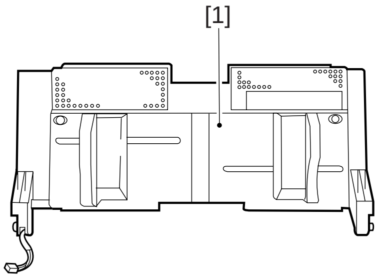


Figure 7-224

C. Feeding Assembly

1. Removing the Feeding Assembly

1) Remove the fixing assembly.
2) Remove the drum unit.
3) Remove the inside cover.
4) Remove the transfer charging roller unit.
5) Disconnect the connector [1], and remove the grounding screw [2].
6) Remove the screw, and detach the feeding assembly positioning pin [3]; then, detach the feeding assembly [4] from the front.

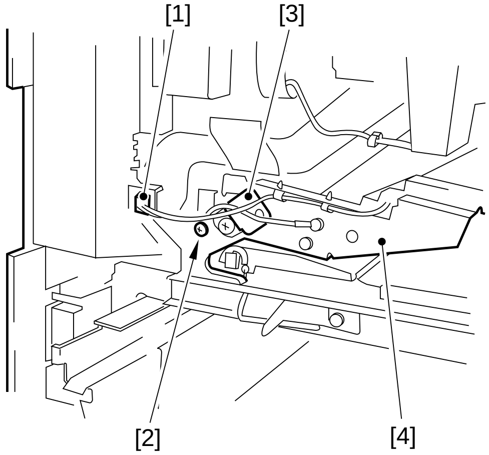


Figure 7-225

2. Removing the Feeding Fan

1) Remove the feeding assembly, and place it after turning it over.
2) Pull out the two idler shafts [1] of the feeding belt.

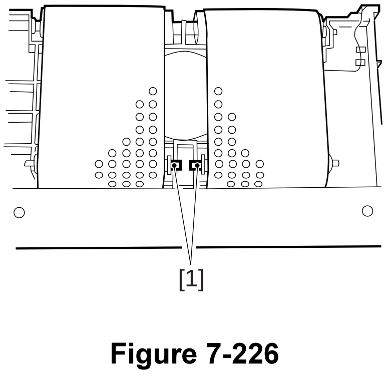


Figure 7-226

3) Shift (displace) the feeding belt [2] to the side.
4) Using a small flat-blade screwdriver, free the hook of the feeding fan cover [3].

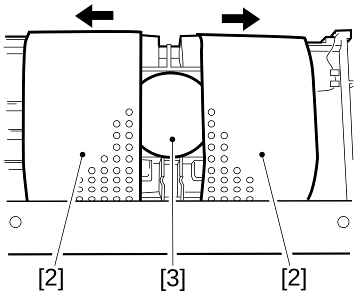


Figure 7-227

5) Removing the feeding fan.

Caution:
When removing the feeding fan cover or the feeding fan, take care not to damage the feeding belt.

D. Lower Feeding Assembly

1. Removing the Lower Feeding Assembly

1) Remove the front door and the inside cover.
2) Remove the cassette 1/2.
3) Remove the pick-up assembly.
4) Lock the feeding assembly.
5) Remove the lower left door.
6) Remove the delivery assembly and the fixing assembly.
7) Disconnect the two connector [1].

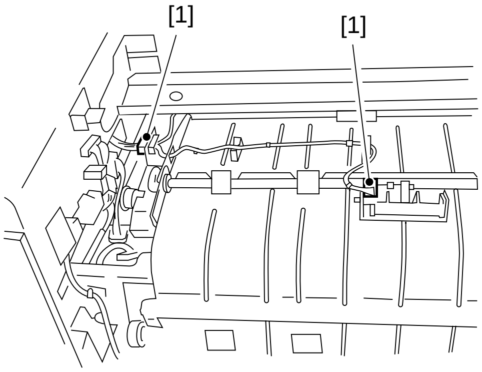


Figure 7-228

7) Open the duplexing assembly inlet guide plate [2] until it is upright, and lift it to remove.

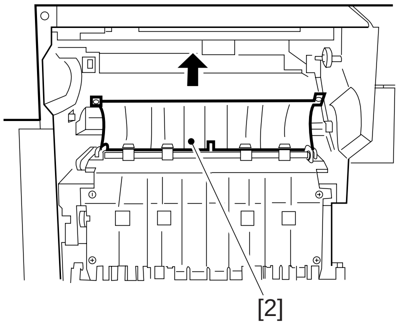


Figure 7-229

8) Pull out the pin [5], and take out the lower feeding assembly lever [3].

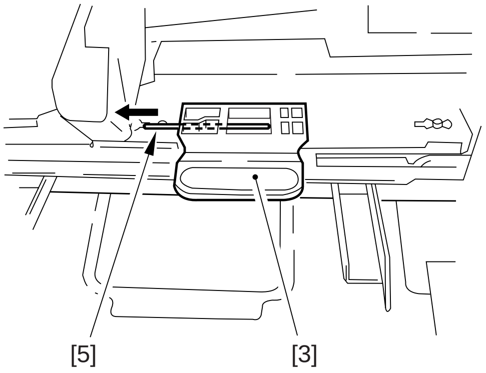


Figure 7-230

9) Remove the two screw [4].
10) Push the lower feeding assembly to the rear, and shift it down and to the front to remove.

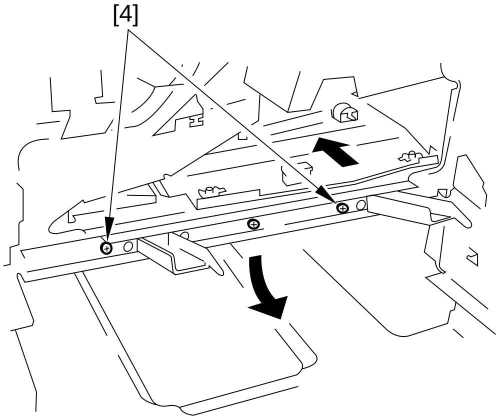


Figure 7-231

2. Mounting the Lower Feeding Assembly

a. Mounting the Lower Feeding Assembly
Pay attention to the top/down spatial relationship of the cover.

- The stay on the left side must be at the top.

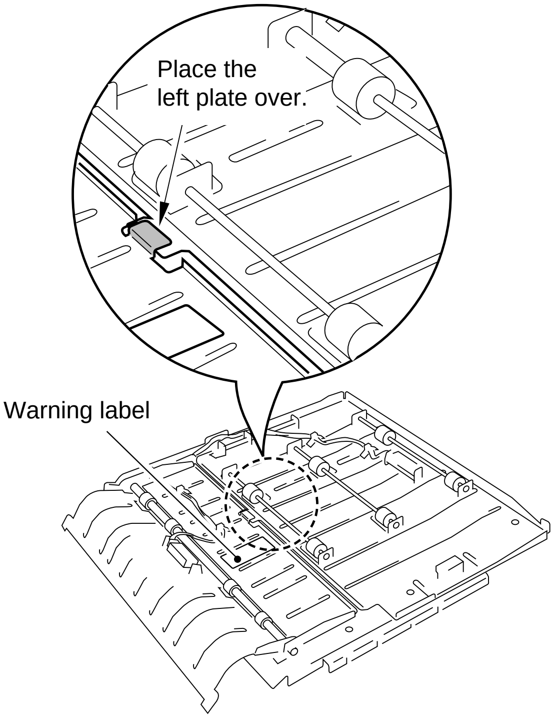


Figure 7-231-1

b. Mounting the Upper Feeding Guide

Check to make sure that the feeding assembly inlet bushing 1 is fitted correctly in the shaft hole of the upper feeding guide 2 and it has the spatial relationship shown in the figure.

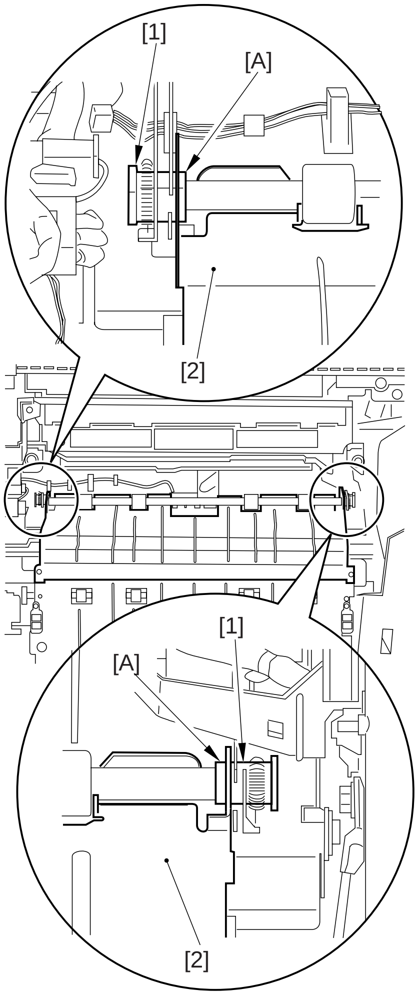


Figure 7-231-2

E. Registration Roller Assembly

1. Removing the Registration Roller

1) Remove the following parts:
   - Drum unit
   - Fixing assembly knob
   - Inside cover
   - Developing assembly
   - Transfer charging roller unit
   - Rear cover
   - Flywheel
   - Scanner motor cooling fan mount (FAM17, FM18)
   - Low-voltage power supply cooing fan unit
   - Rear harness unit (2 screws)
   - Power cord mount
   - Low-voltage cord mount
   - Accessories power supply PCB
   - Scanning lamp
   - Registration clutch
   - Main drive unit
2) Remove the transfer guide positioning boss [1], spring [2], and two E-rings [3] from the rear of the copier.

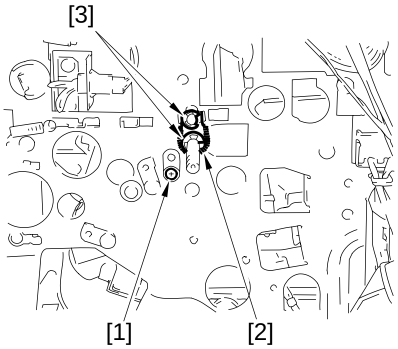


Figure 7-232

3) Remove the transfer guide positioning boss from the copier's front; then, detach the transfer guide unit [5].

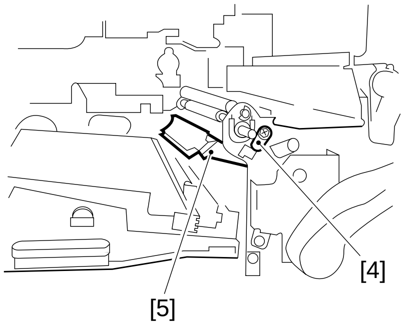


Figure 7-233

4) Remove the spring [6] and E-ring [7] from the copier's front; then, detach the bush of the registration roller.

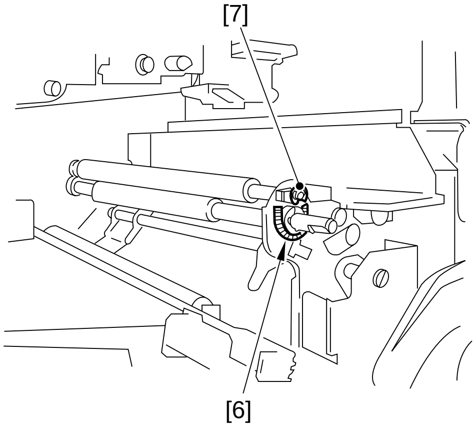


Figure 7-234

5) Remove the lower registration roller and then the upper registration roll in the order indicated. (Be sure to take care not to damage the teeth of the gear.)

F. Delivery Assembly

1. Removing the Delivery Assembly

1) Turn off the power, and disconnect the power plug.
2) Open the front door.
3) Open the delivery assembly, and remove the screw [2]; then, detach the delivery assembly connector cover [1]. (The connector cover is hooked in place.)

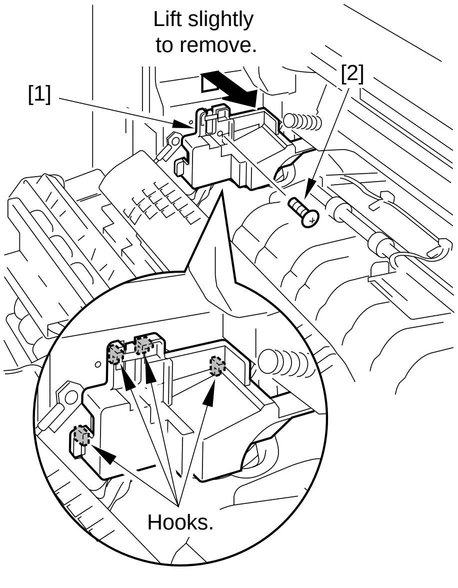


Figure 7-235

4) Free the hook [4] of the delivery assembly lower cover.

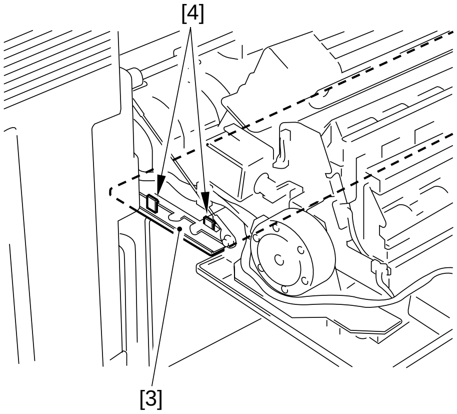


Figure 7-236

5) Close the delivery assembly, and shift the delivery assembly lower cover to remove.

Caution:
The delivery assembly lower cover cannot be removed unless the delivery assembly is closed. Be sure to free the hook, and then close the lever assembly.

6) Disconnect the connector [5].
7) Open the delivery assembly, and remove the screw [7]; then, detach the cable from the copier (both rear and front).

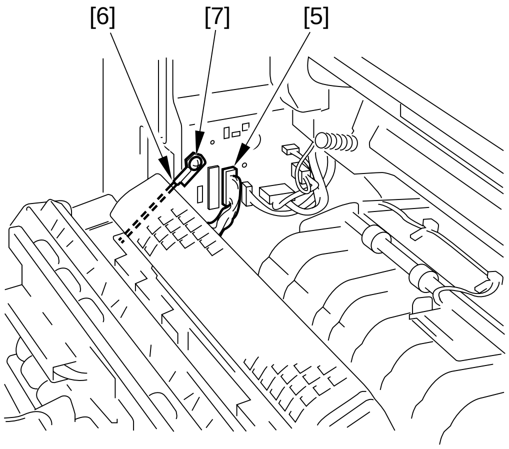


Figure 7-237

8) Pull out the spacer [8] from the right side of the delivery assembly.
9) Release the bushing [9] by shifting it to the left.

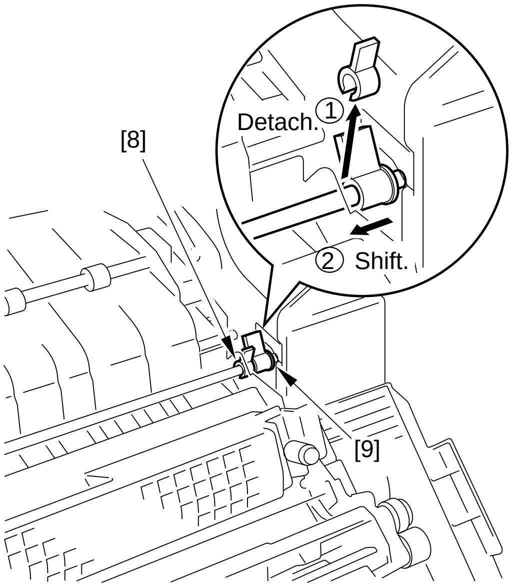


Figure 7-238

10) Shift the delivery assembly to the right, and detach its left and then its right.
- When mounting the delivery assembly connector cover 9, be sure that it will not interfere with the spring 10 of the lower feeding assembly.

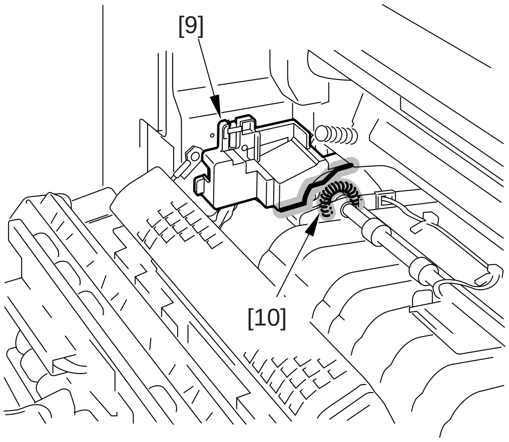


Figure 7-238-1

2. Removing the Paper Guide Plate

If the sheet attached to the paper guide starts to deform (wavy) because of jams, replace the paper guide. (If unattended, it can cause more jams.)

1) Remove the delivery assembly.
2) Disconnect the connector [1].
3) Remove the four screws [2], and detach the delivery reversal motor.

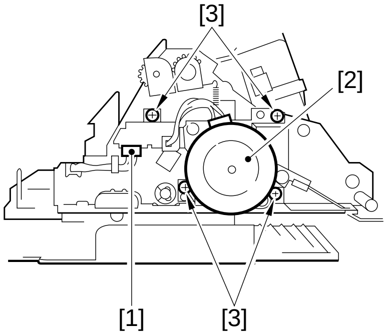


Figure 7-239

4) Remove the screw [5], and detach the positioning screw [4].

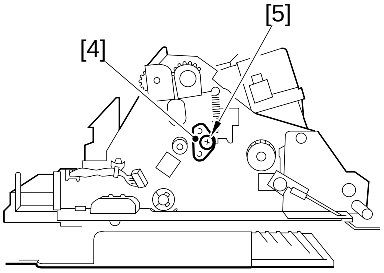


Figure 7-240

5) Open the de-curling assembly.
6) Remove the spring [6], and detach the paper guide plate [7].

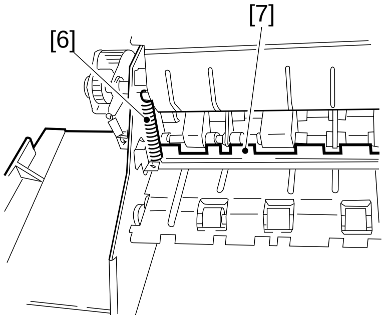


Figure 7-241

3. Replacing the Static Eliminator

1) Remove the delivery assembly.
2) Remove the E-ring [1] and the bearing at the front.

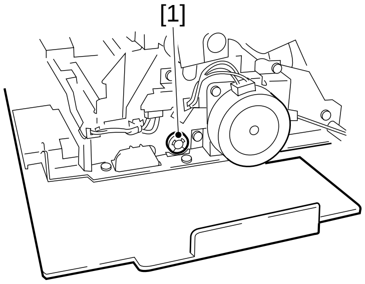


Figure 7-242

3) Disconnect the connector [3], and remove the three screws [4]; then, detach the external delivery motor [2].

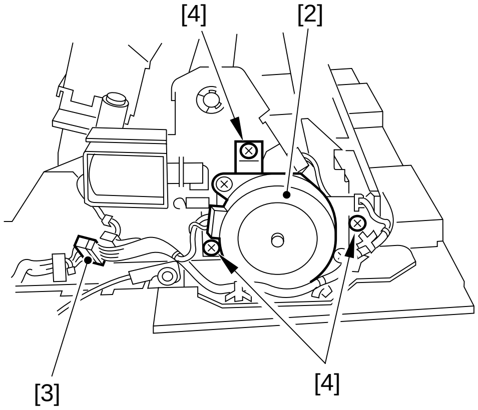


Figure 7-243

4) Remove the gear [5], and remove the E-ring [6] and the bearing.
(Take care not to drop the pin from the gear.)

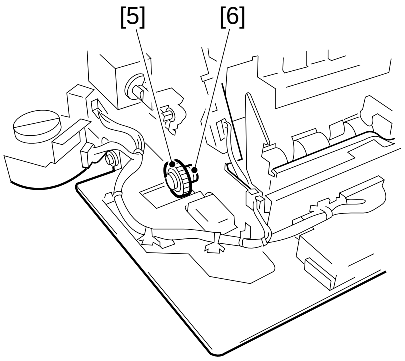


Figure 7-24

5) Disconnect the two connectors [7] of the heat discharge fans.
6) Remove the four screws [8] used to secure the delivery assembly cover in place (both front and rear).

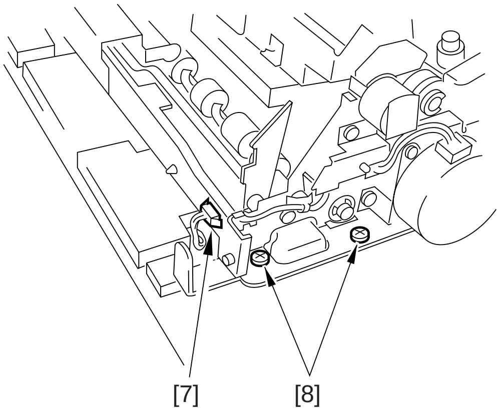


Figure 7-245

7) Remove the delivery roller [9], and remove the delivery assembly cover [10].

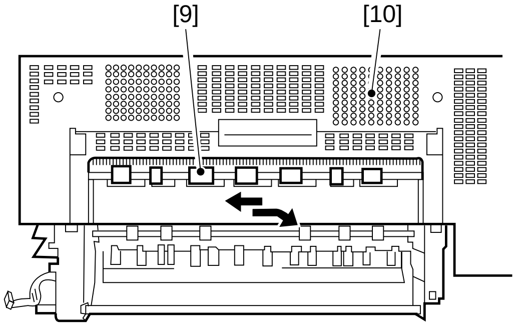


Figure 7-246

8) Detach the static eliminator [11] from the delivery assembly.

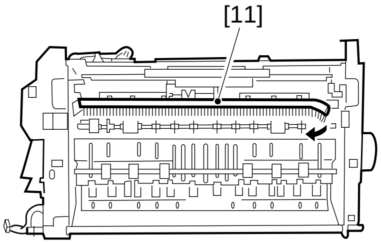


Figure 7-247

9) Attach the static eliminator as follows:
   a. Attach the static eliminator to the center of the delivery assembly.
   b. Place the left edge of the static eliminator along the scribe line.

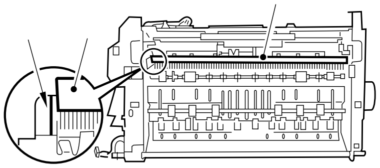


Figure 7-248

4. Positioning the Paper Deflecting Plate 1 Solenoid (SL5)

1) Remove the delivery assembly.
2) Place the delivery assembly on a desk upright.
3) Push down the shaft of the delivery flapper protruding from the hole in the delivery assembly front plate against the edge of the edge of the hole.
4) While keeping the condition in step 3), loosen the adjusting screw so that the gap between the rubber ring moved to the solenoid frame and the steel E-ring of the paper deflecting plate 1 solenoid (SL5) is about 0.2 mm.
5) Mount the delivery assembly to end the adjustment work.

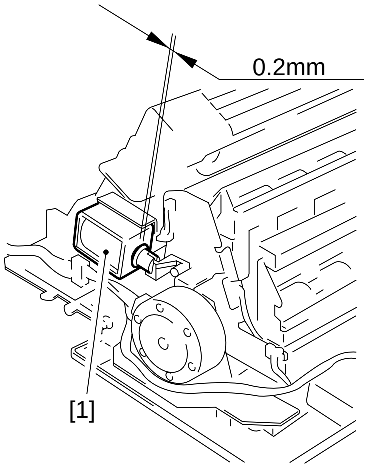


Figure 7-249

G. Lower Feeding Motor

1. Removing the lower Feeding Motor Mount

1) Disconnect the power plug, and remove the following:
   - Rear cover (4 screws)
   - Flywheel (3 screws)
   - Connector mount
   - DC controller PCB (2 screws, all connectors)
   - Composite power supply PCB (2 screws, all connectors)
   - Power supply cord mount
   - Low-voltage power supply PCB
2) Remove the [3] screws, and detach the two harness guides.
   Remove the four screws [2], and disconnect the two connectors; then, detach the lower feeding motor [1].

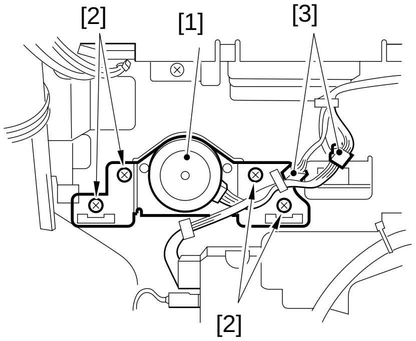


Figure 7-250

H. Pick-Up Drive Assembly

1. Removing the Main Motor

1) Disconnect the power plug, and remove the following:
   - Rear cover (4 screws)
   - Flywheel (3 screws)
2) Remove the four screws [2], and disconnect the two connectors [3]; then, detach the main motor [1].

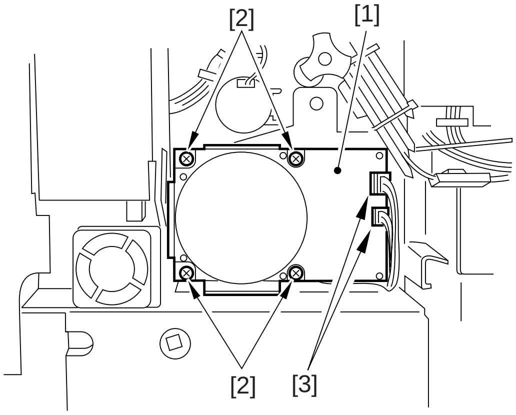


Figure 7-251

2. Removing the Pick-Up Drive Unit

1) Disconnect the power plug, and remove the following:
   - Drum unit
   - Developing assembly
   - Rear cover
   - Flywheel
   - Composite power supply PCB
   - Power supply cord mount
   - Low-voltage power supply cooling fan
   - Low-voltage PCB
   - Scanner motor cooling fan mount (FM17, FM18)
   - Accessories PCB
   - Scanner cooling fan
2) Remove the two screws, and detach the harness guide [1].

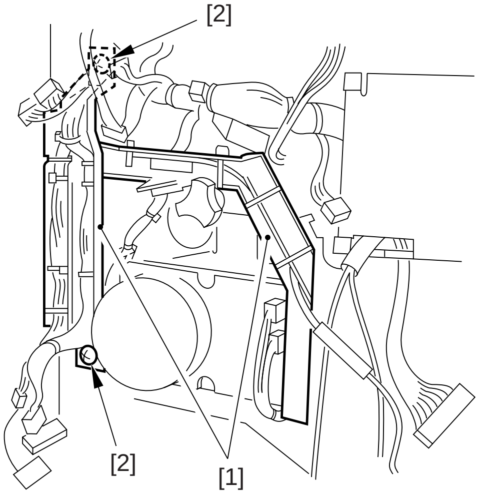


Figure 7-252

3) Remove the registration roller clutch.
4) Remove the four screws [3], and disconnect all connectors; then, detach the pick-up drive unit [2].

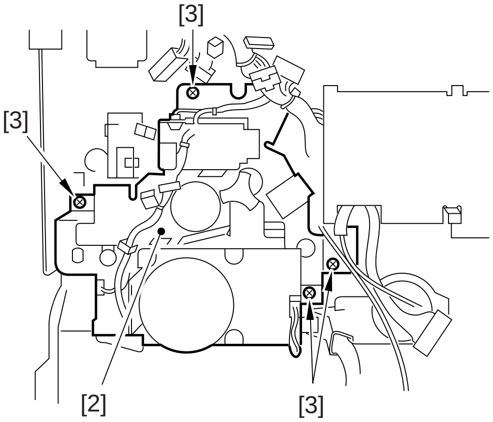


Figure 7-253

3. Registration Clutch

1) Remove the four screws, and detach the rear cover; then, remove the three screws, and detach the flywheel.
2) Remove the registration clutch [1], remove the clip ring [2], and disconnect the connector [3].

When mounting the registration clutch, cheek to make sure that the grip ring has been mounted correctly.

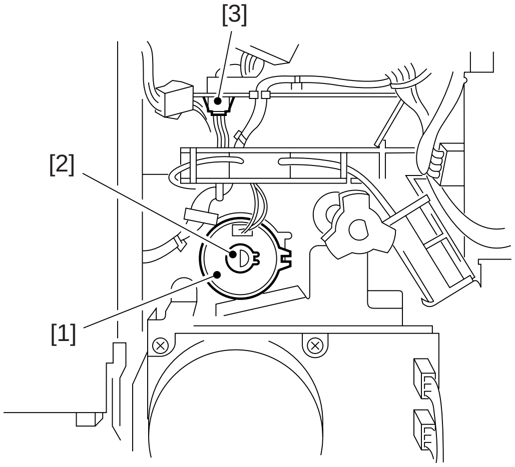


Figure 7-254

4. Multifeeder Clutch

1) Remove the four screws, and detach the rear cover; then, remove the two screws [2], and disconnect the connector [3].

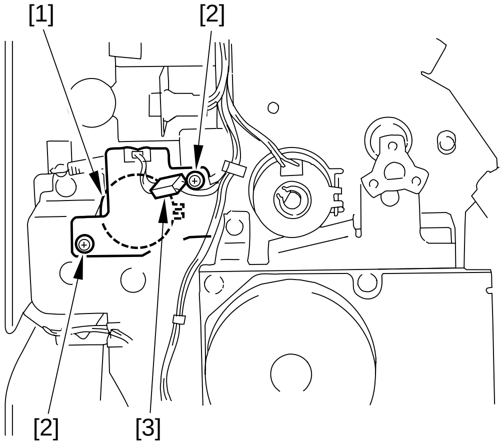


Figure 7-255

I. Vertical Path Assembly

Remove the vertical path assembly.

1) Remove the following:
   - Inside cover
   - Pick-up unit
   - Pick-up drive unit
2) Remove the two rolls, and disconnect the connector; then, detach the multifeeder assembly.
3) Remove the two screws, and detach the two positioning bosses [1] at the rear of the copier.

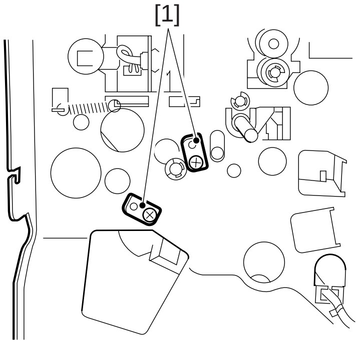


Figure 7-256

4) Remove the varistor [2], positioning boss [3], and bushing plate [4] (3 screws).

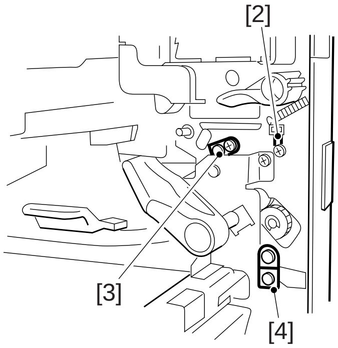


Figure 7-257

5) Remove the two screws, and detach the two multifeeder unit mounts [5].
6) Disconnect the connector [7], and detach the vertical path assembly.

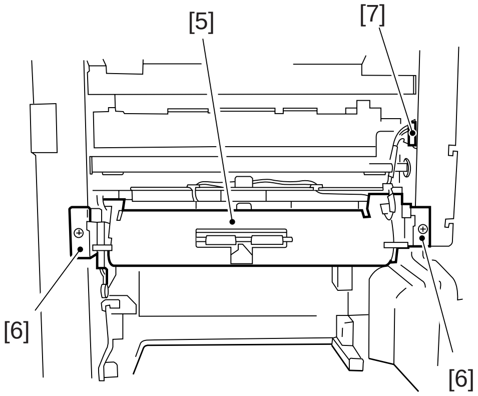


Figure 7-258

2. Removing the Horizontal Registration Motor

1) Remove the following:
   - Pick-up unit (p. 4-19.)
   - Pick-up drive unit (p. 4-16)
   - Vertical path unit (p. 4-17)
2) Remove the two screws [2], and disconnect the connector [3]; then, detach the horizontal registration motor [1].

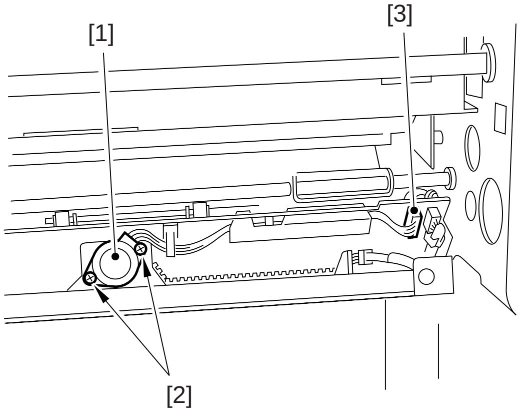


Figure 7-259

CHAPTER 8

PAPER DECK

I. PAPER DECK 8-1
  A. Inputs to and Outputs from the Deck Driver 8-1
  B. Pick-Up 8-4
  C. Detecting Paper 8-7
  D. Deck Lifter 8-9
  E. Opening/Closing the Deck (compartment) 8-12
  F. Controlling the Deck Motor .. 8-14
II. DETECTING JAMS 8-18
  A. Outline 8-18
III. DISASSEMBLY/ASSEMBLY 8-20
  A. External Covers 8-21
  B. Paper Deck 8-24
  C. Drive System 8-29
  D. Feeding System 8-36
  E. Electrical System 8-39

I. PAPER DECK

A. Inputs to and Outputs from the Deck Driver

1. Inputs to the Deck Driver (1/2)

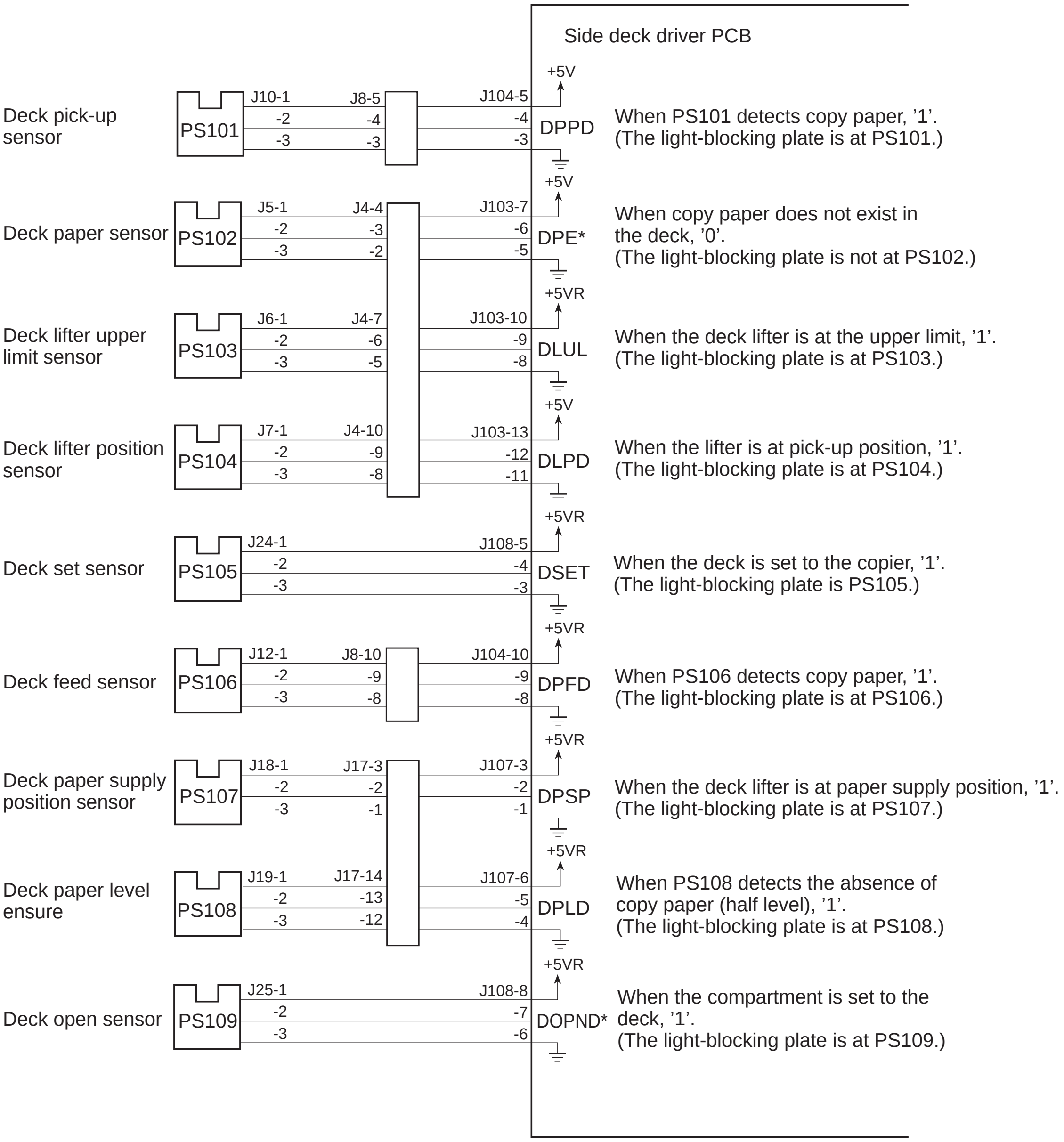

Side deck driver PCB
Deck pick-up sensor
PS101
J10-1
-2
-3
J8-5
-4
-3
J104-5
-4
-3
+5V
DPPD
When PS101 detects copy paper, '1'.
(The light-blocking plate is at PS101.)
Deck paper sensor
PS102
J5-1
-2
-3
J4-4
-3
-2
J103-7
-6
-5
+5V
DPE*
When copy paper does not exist in the deck, '0'.
(The light-blocking plate is not at PS102.)
Deck lifter upper limit sensor
PS103
J6-1
-2
-3
J4-7
-6
-5
J103-10
-9
-8
+5VR
DLUL
When the deck lifter is at the upper limit, '1'.
(The light-blocking plate is at PS103.)
Deck lifter position sensor
PS104
J7-1
-2
-3
J4-10
-9
-8
J103-13
-12
-11
+5V
DLPD
When the lifter is at pick-up position, '1'.
(The light-blocking plate is at PS104.)
Deck set sensor
PS105
J24-1
-2
-3
J108-5
-4
-3
+5VR
DSET
When the deck is set to the copier, '1'.
(The light-blocking plate is PS105.)
Deck feed sensor
PS106
J12-1
-2
-3
J8-10
-9
-8
J104-10
-9
-8
+5VR
DPFD
When PS106 detects copy paper, '1'.
(The light-blocking plate is at PS106.)
Deck paper supply position sensor
PS107
J18-1
-2
-3
J17-3
-2
-1
J107-3
-2
-1
+5VR
DPSP
When the deck lifter is at paper supply position, '1'.
(The light-blocking plate is at PS107.)
Deck paper level ensure
PS108
J19-1
-2
-3
J17-14
-13
-12
J107-6
-5
-4
+5VR
DPLD
When PS108 detects the absence of copy paper (half level), '1'.
(The light-blocking plate is at PS108.)
Deck open sensor
PS109
J25-1
-2
-3
J108-8
-7
-6
+5VR
DOPND*
When the compartment is set to the deck, '1'.
(The light-blocking plate is at PS109.)

Figure 8-101a

2. Inputs to the Deck Driver (2/2)

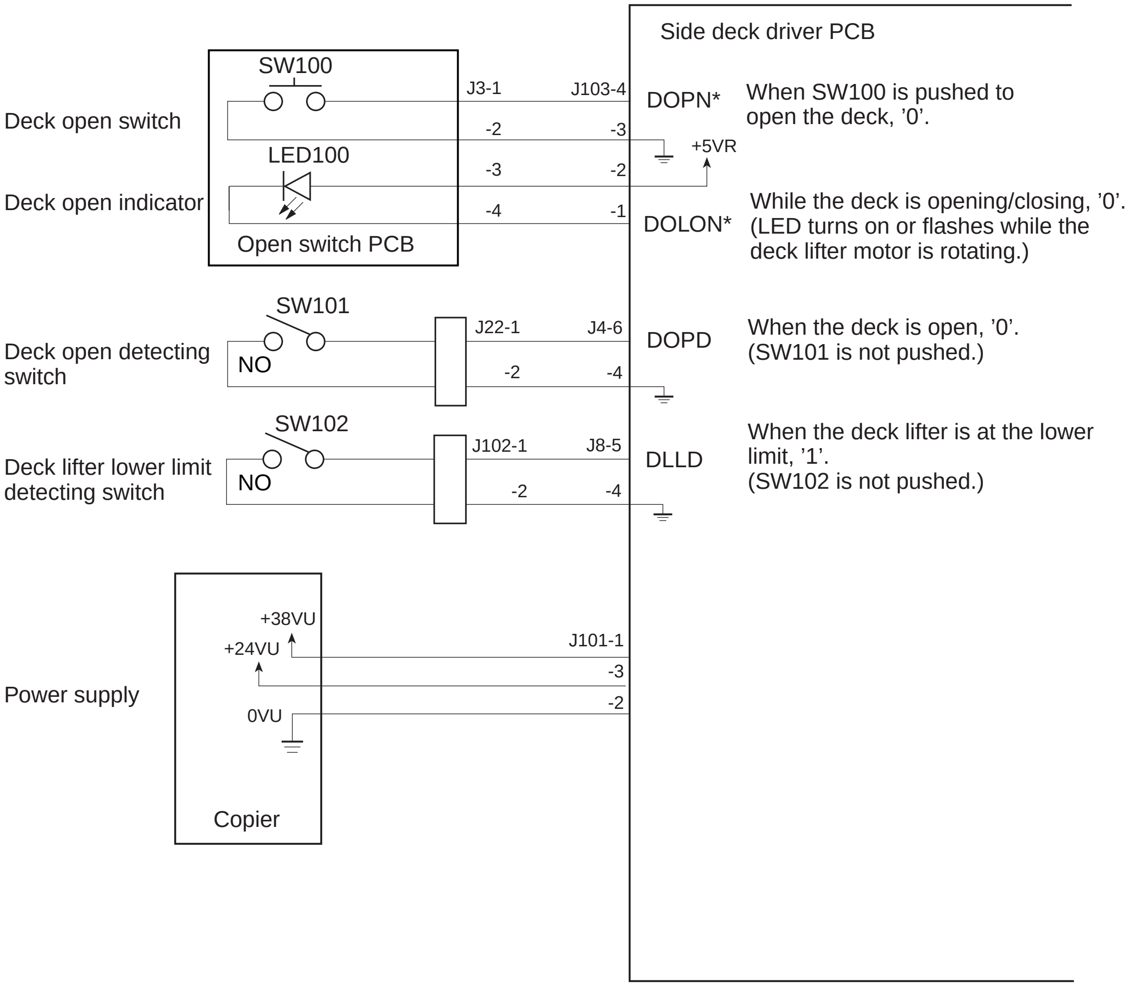

Side deck driver PCB
SW100
Deck open switch
J3-1
J103-4
DOPN*
When SW100 is pushed to open the deck, '0'.
-2
-3
+5VR
LED100
-3
-2
Deck open indicator
-4
-1
DOLON*
While the deck is opening/closing, '0'. (LED turns on or flashes while the deck lifter motor is rotating.)
Open switch PCB
SW101
Deck open detecting switch
NO
J22-1
J4-6
DOPD
When the deck is open, '0'. (SW101 is not pushed.)
-2
-4
SW102
Deck lifter lower limit detecting switch
NO
J102-1
J8-5
DLLD
When the deck lifter is at the lower limit, '1'. (SW102 is not pushed.)
-2
-4
Power supply
+38VU
+24VU
J101-1
-3
-2
0VU
Copier

Figure 8-101b

3. Outputs from the Deck Driver (1/1)

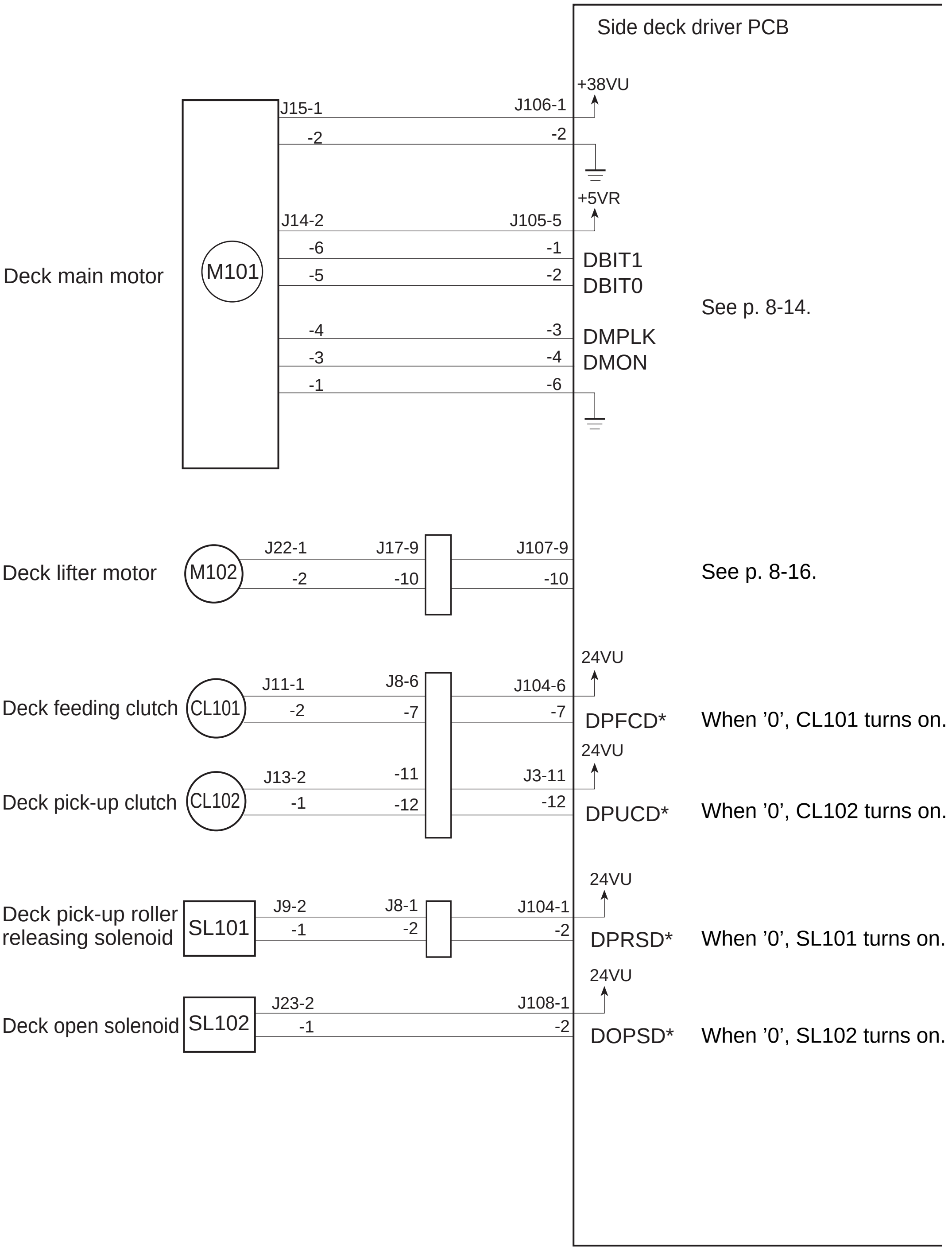

Side deck driver PCB
+38VU
J15-1
J106-1
-2
-2
+5VR
J14-2
J105-5
-6
-1
DBIT1
Deck main motor
M101
-5
-2
DBIT0
See p. 8-14.
-4
-3
DMPLK
-3
-4
DMON
-1
-6
J22-1
J17-9
J107-9
Deck lifter motor
M102
-2
-10
-10
See p. 8-16.
24VU
J11-1
J8-6
J104-6
Deck feeding clutch
CL101
-2
-7
-7
DPFCD*
When '0', CL101 turns on.
24VU
J13-2
-11
J3-11
Deck pick-up clutch
CL102
-1
-12
-12
DPUCD*
When '0', CL102 turns on.
24VU
J9-2
J8-1
J104-1
Deck pick-up roller releasing solenoid
SL101
-1
-2
-2
DPRSD*
When '0', SL101 turns on.
24VU
J23-2
J108-1
Deck open solenoid
SL102
-1
-2
DOPSD*
When '0', SL102 turns on.

Figure 8-102

B. Pick-Up

1. Outline

The side paper deck ("deck," hereafter) is capable of holding 3500 sheets of copy paper (A4/LTR/B; 80 g/m^2), and is driven by control signals from the copier's DC-CPU.

The lifter of the deck is driven by the deck lifer motor (M102), and copy paper is picked up and moved by the deck main motor (M101).

2. Pick-Up Operation

The copy paper set in the deck is moved up by the lifter, and is held at a specific pick-up position.

When the Copy Start key is pressed and the deck pick-up clutch (CL102) turns on, the drive of the deck main motor (M101) rotates the pick-up roller to pick up copy paper. At this time, the pick-up/feeding roller and the separation roller serve to make sure that only one sheet of copy paper is picked up. When the deck pick-up sensor (PS101) detects copy paper, the deck pick-up roller releasing solenoid (SL101) turns on to move the pick-up roller away from the surface of copy paper.

The deck feeding roller starts to rotate when the deck feeding clutch (CL101) turns on. After pick-up, the copy paper is moved to the copier's registration roller, and is made to arch for removing the skew.

The registration roller controls the copy paper so that its leading edge will match the image on the photosensitive drum.

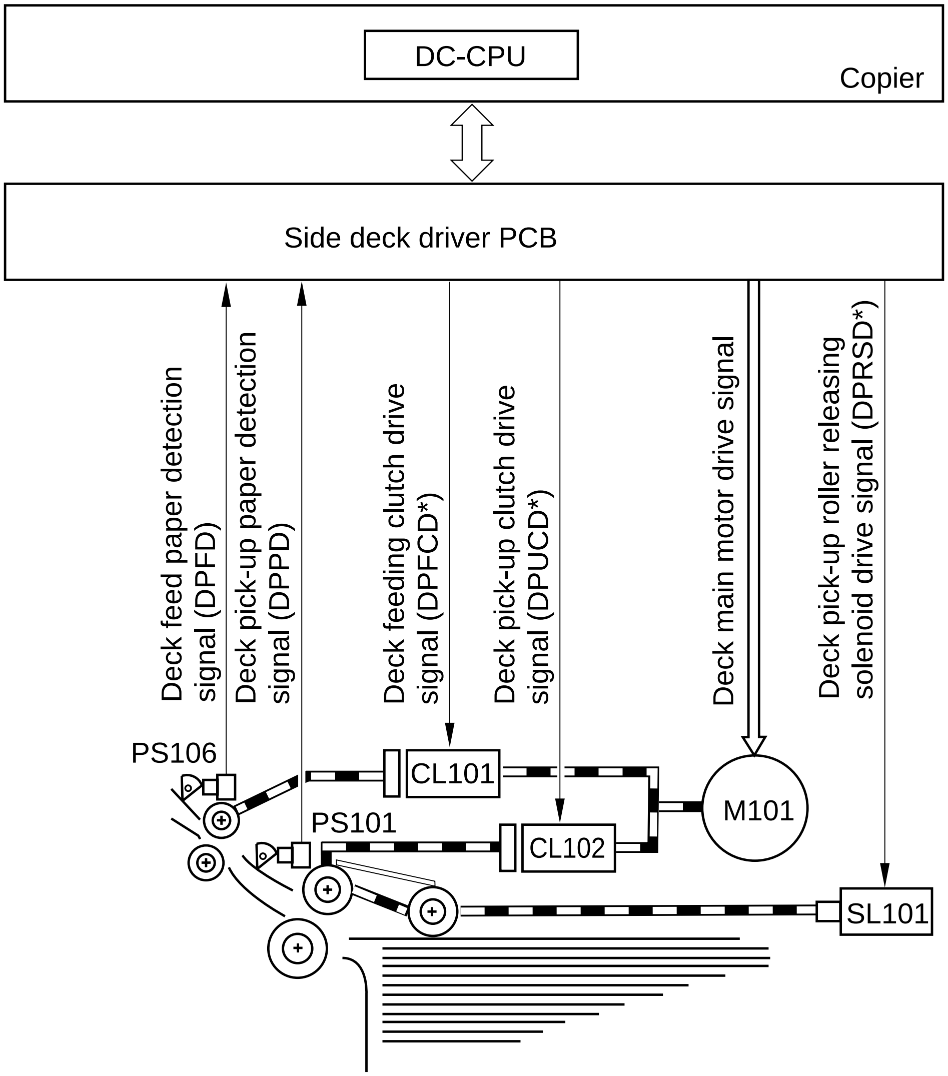

DC-CPU
Copier
Side deck driver PCB
Deck feed paper detection signal (DPFD)
Deck pick-up paper detection signal (DPPD)
Deck feeding clutch drive signal (DPFCD*)
Deck pick-up clutch drive signal (DPUCD*)
Deck main motor drive signal
Deck pick-up roller releasing solenoid drive signal (DPRSD*)
PS106
CL101
M101
PS101
CL102
SL101

Figure 8-103

3. Sequence of Operations (pick-up from the deck)

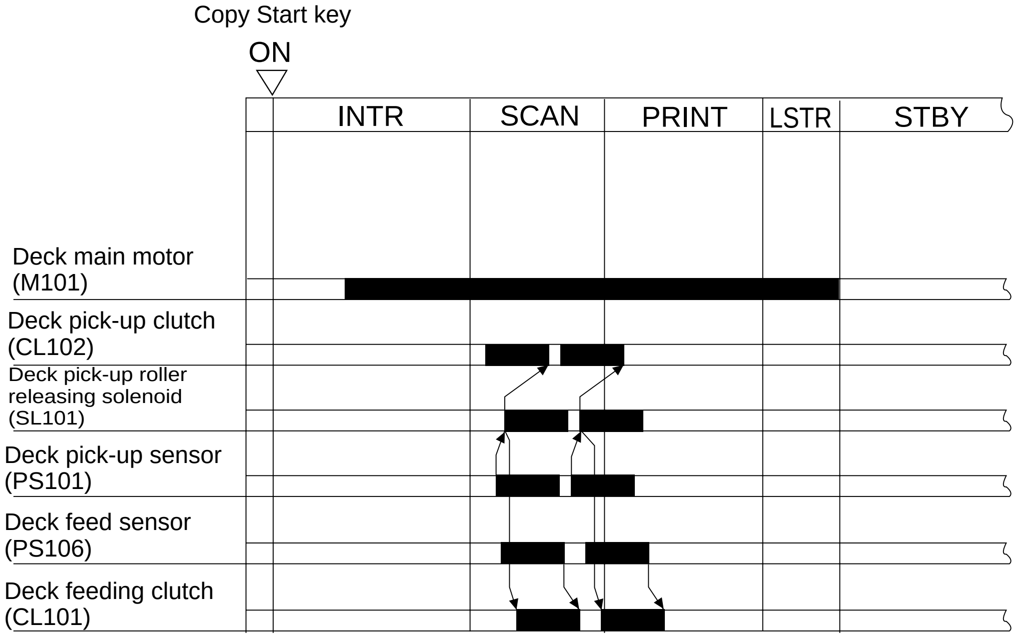

Copy Start key
ON
INTR
SCAN
PRINT
LSTR
STBY
Deck main motor (M101)
Deck pick-up clutch (CL102)
Deck pick-up roller releasing solenoid (SL101)
Deck pick-up sensor (PS101)
Deck feed sensor (PS106)
Deck feeding clutch (CL101)

Figure 8-104

C. Detecting Paper

1. Detecting the Presence/Absence of Paper

The presence/absence of paper inside the deck is monitored by the deck paper sensor (PS102). When the copy paper runs out and, as a result, the paper detecting lever of the pick-up roller assembly leaves the deck paper sensor, the copier's control panel will indicate the Add Paper message.

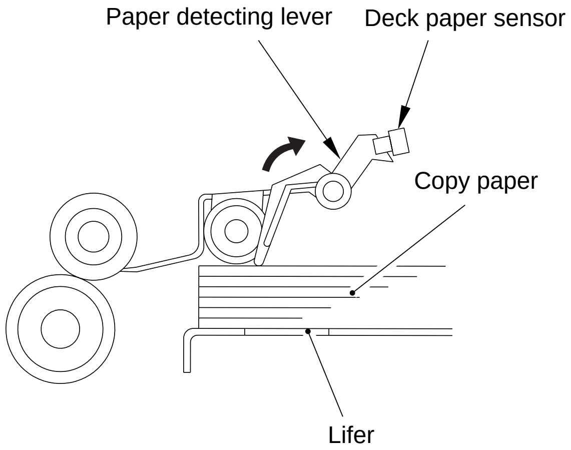

Paper detecting lever
Deck paper sensor
Copy paper
Lifer

Figure 8-105a Paper Present

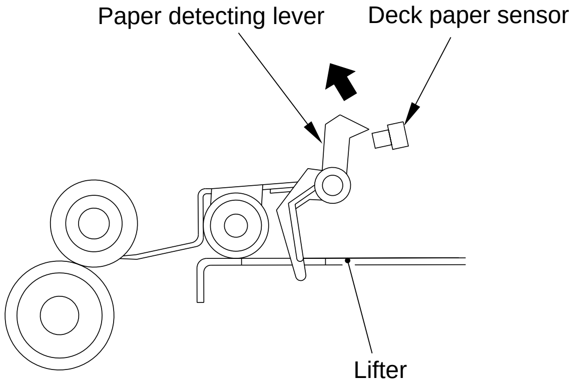

Paper detecting lever
Deck paper sensor
Lifter

Figure 8-105b Paper Absent

2. Switching the Deck Paper Size

The deck paper size may be switched to suit the needs of the use by moving the guide plate inside the deck to match the size of copy paper and then by entering the new paper size in service mode (OPTION>ACC>**DK-P**).

3. Detecting the Level of Paper in the Deck

The deck uses the deck paper supply position sensor (PS107), deck paper level sensor (PS108), and deck paper sensor (PS102) to find out an approximate level of paper inside its compartment for indication on the copier's control panel. Table 8-101 shows the combinations used to identify the levels of copy paper and the indications on the copier's control panel for the levels.

Paper level (approx.)	PS102	PS107	PS108	Control panel indication
1750 to 3500 sheets	1	1	1	≡
500 to 1750 sheets	1	1	0	=
1 to 500 sheets	1	0	0	—
0 sheet	0	0	0	⊔

1: The light-blocking plate is over the sensor.
0: The light-blocking plate is not over the sensor.

Table 8-101

D. Deck Lifter

1. Lifter Movement

The lifter of the deck is connected to a reel by means of a cable, and is driven by the deck lifter motor (M102). The lifter is moved up or down by switching the direction of motor rotation.

When the deck (compartment) is pushed inside the copier, the deck open detecting switch (SW101) is pushed, and the lifter starts and continues to move up when the deck open sensor (PS109) detects the light-blocking plate until the deck lifter position sensor (PS104) detects the top surface of the paper placed on the lifter.

The deck lifter upper limit sensor (PS103) is used to prevent damage to the deck, as could occur should the deck fail to move up after the sensor lever blocks the deck lifter position sensor.

The lifter states to move down, on the other hand, when the deck open switch (SW100) is pressed, and continues to move down until the lifter leaves the sensor lever of the deck paper supply position sensor (PS107), i.e., falling edge of the sensor signal.

When copy paper is supplied and the lever of the deck paper supply position sensor is pushed, the lifter moves farther down until the copy paper leaves the sensor lever. The lifter repeats this operation each time paper is supplied until the deck lifter lower limit detecting switch (SW102) is pushed (maximum paper supply position).

The copier's DC-CPU keeps track of the states of the sensors related to lifter operation, and if the deck paper supply position sensor(PS107) is '0' while both the deck lifter position sensor (PS104) and the deck level sensor position sensor (PS108) are '1', the copier's control panel will indicate "E041." (Such a combination of states, however, is highly unlikely.)

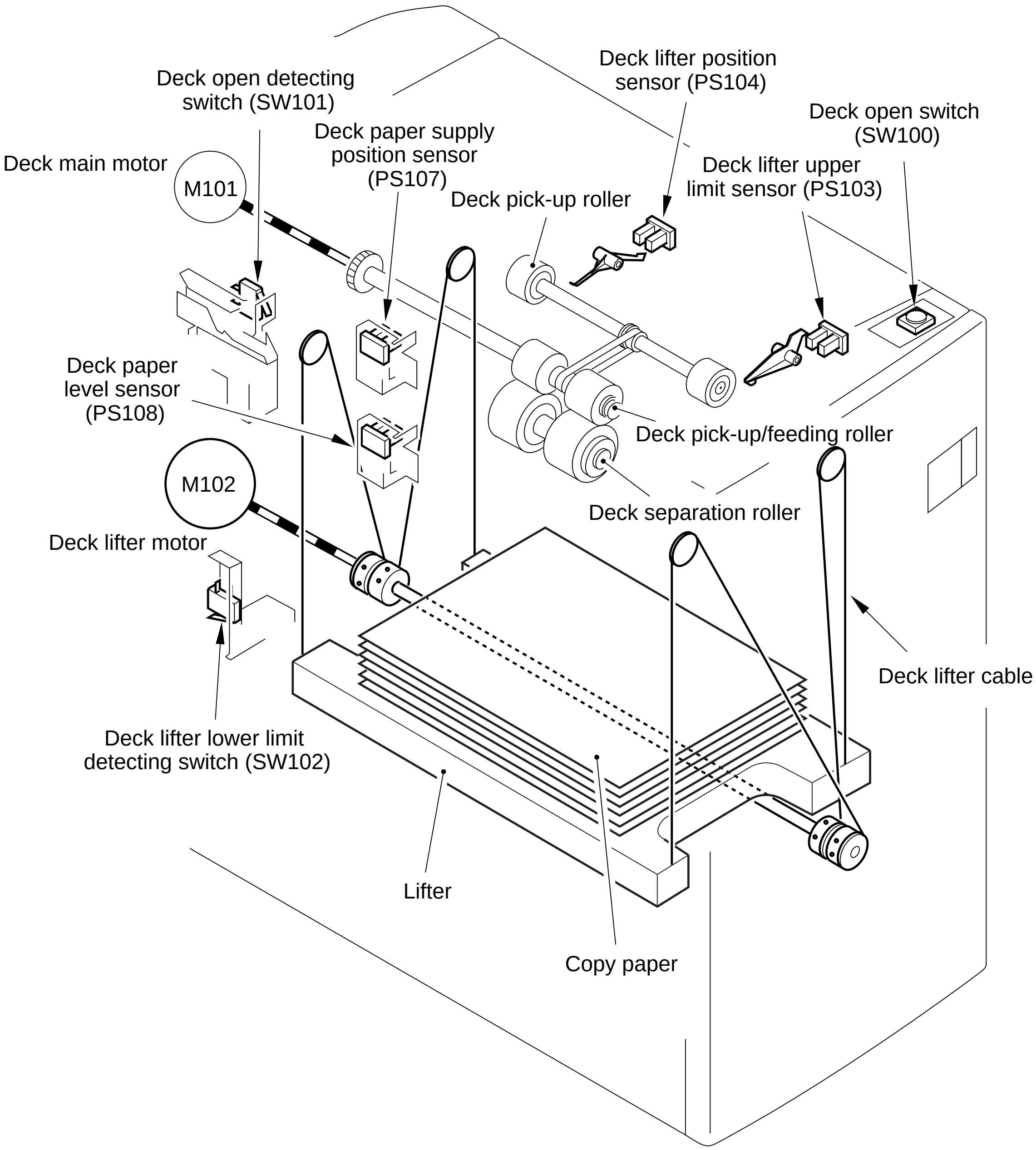

Deck open detecting switch (SW101)
Deck lifter position sensor (PS104)
Deck open switch (SW100)
Deck paper supply position sensor (PS107)
Deck main motor
M101
Deck lifter upper limit sensor (PS103)
Deck pick-up roller
Deck paper level sensor (PS108)
Deck pick-up/feeding roller
M102
Deck separation roller
Deck lifter motor
Deck lifter cable
Deck lifter lower limit detecting switch (SW102)
Lifter
Copy paper

Figure 8-106

2. Paper Level Indicator on the Deck front Cover

The drive of the deck lifter motor (M102) is received by a coupling, and is transmitted to the rack by means of a drive belt. The rack is equipped with a black belt which moves up and down behind the indicator window in the deck front cover in keeping with the movement of the rack.

When the copy paper starts to run out and, as a result, the lifter moves up to the pick-up position, the area of the black belt within the indicator window increases gradually, replacing the white area and thereby indicating the level of copy paper.

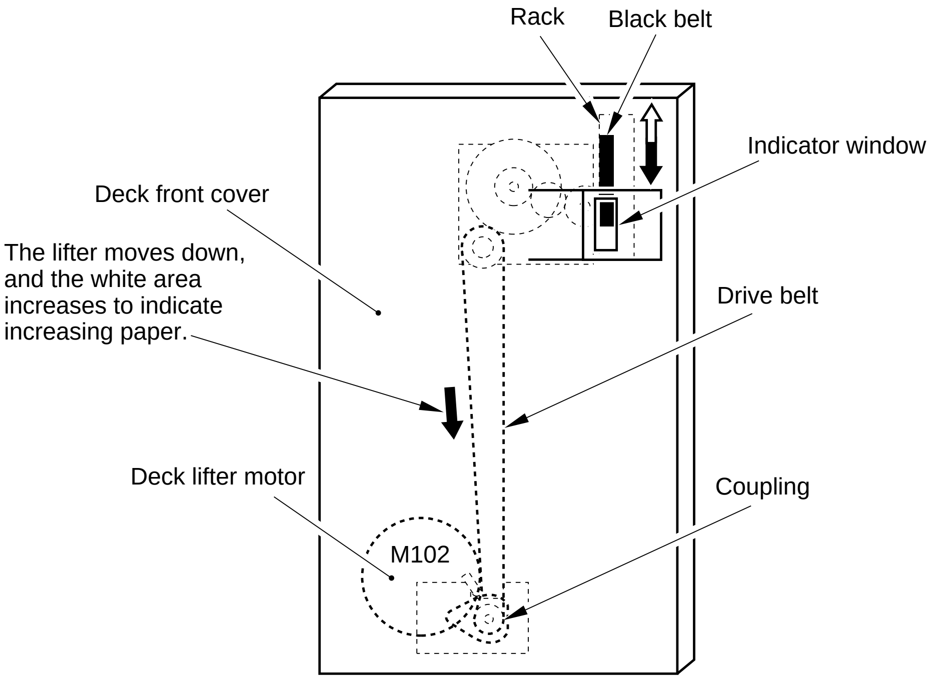

Rack
Black belt
Indicator window
Deck front cover
The lifter moves down, and the white area increases to indicate increasing paper.
Drive belt
Deck lifter motor
Coupling
M102

Figure 8-107

E. Opening/Closing the Deck (compartment)

1. Opening/Closing of the Deck

When the deck open switch (SW100) is pushed, the deck open solenoid (SL102) turns on to release the deck (compartment), pushing the deck several centimeters to the front by the force of a spring. At the same time, the deck lifter motor (M102) starts to rotate to move down the lifter inside the deck.

When the deck (compartment) is pushed in the copier manually, the deck open sensor (PS109) blocks the light-blocking plate of the compartment so that the lifter moves up to the pick-up position.

When the deck lifter motor starts to rotate in response to the opening/closing of the deck, the deck open indicator (LED100) on the open switch PCB turns on or flashes.

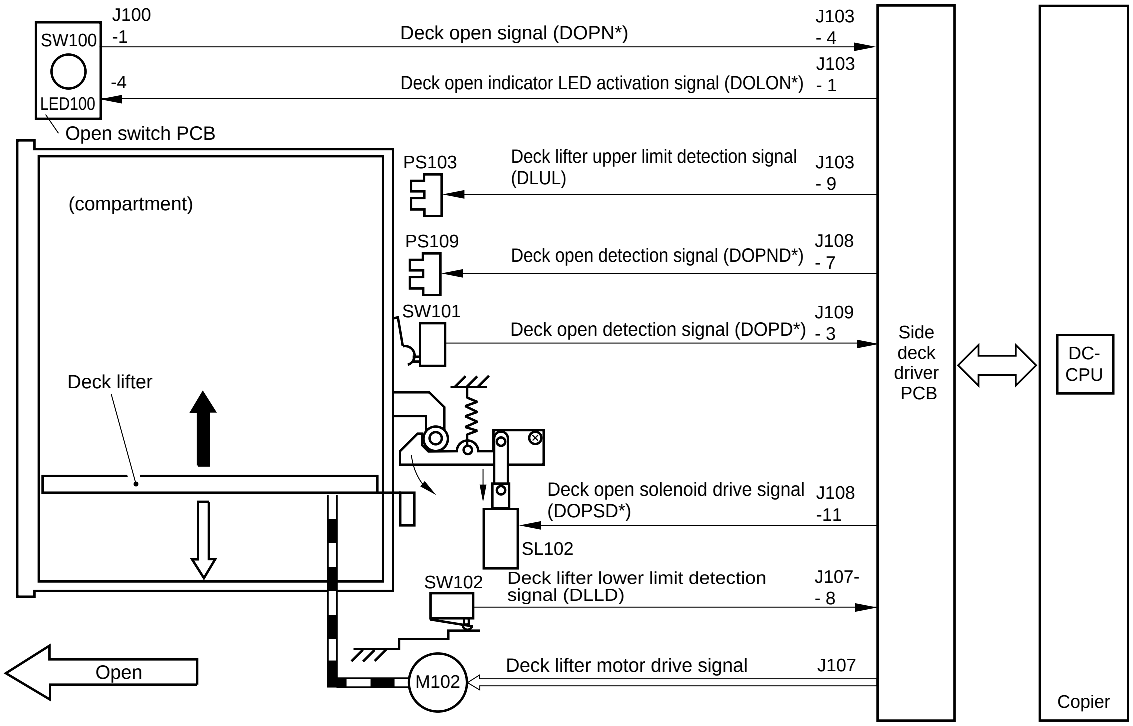
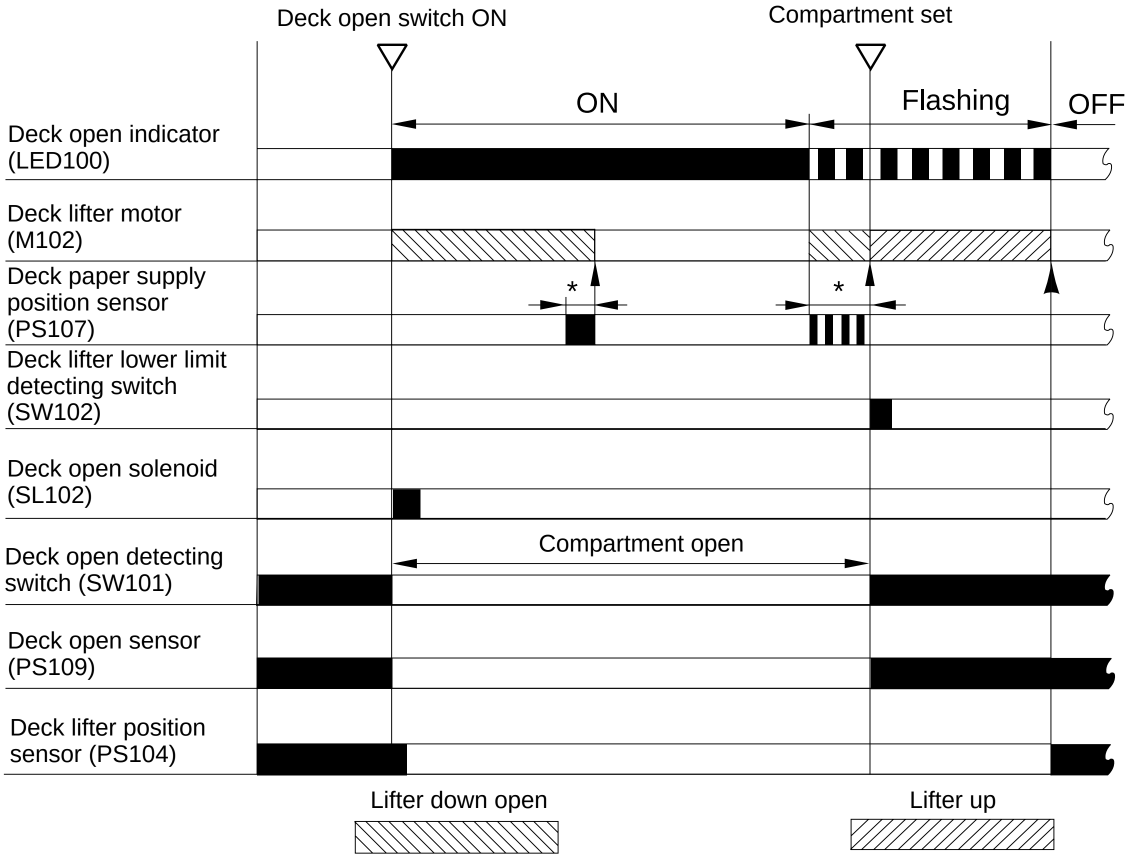

SW100
LED100
J100
-1
-4
Open switch PCB
Deck open signal (DOPN*)
J103 - 4
Deck open indicator LED activation signal (DOLON*)
J103 - 1
(compartment)
PS103
Deck lifter upper limit detection signal (DLUL)
J103 - 9
PS109
Deck open detection signal (DOPND*)
J108 - 7
SW101
Deck open detection signal (DOPD*)
J109 - 3
Deck lifter
Deck open solenoid drive signal (DOPSD*)
J108 -11
SL102
SW102
Deck lifter lower limit detection signal (DLLD)
J107- - 8
Open
M102
Deck lifter motor drive signal
J107
Side deck driver PCB
DC-CPU
Copier

Figure 8-108

2. Sequence of Operations


Deck open switch ON
Compartment set
ON
Flashing
OFF
Deck open indicator (LED100)
Deck lifter motor (M102)
Deck paper supply position sensor (PS107)
*
*
Deck lifter lower limit detecting switch (SW102)
Deck open solenoid (SL102)
Deck open detecting switch (SW101)
Compartment open
Deck open sensor (PS109)
Deck lifter position sensor (PS104)
Lifter down open
Lifter up

* Varies depending on the size of the stack.

Figure 8-109

F. Controlling the Deck Motor

1. Controlling the Deck Main Motor (M101)

The deck main motor is controlled by the copier's DC-CPU. Figure 8-110 shows the circuit used to drive the deck main motor, and the circuit has the following functions:

[1] Turning on and off the deck main motor.
[2] Switching the rotation speed of the deck main motor.

a. Turning On and Off the Motor

When the deck main motor drive signal (DMON) from the copier goes '1', the motor drive circuit goes '0', causing the motor to rotate at a specific speed. When the deck main motor drive signal (DOMON) goes '0', on the other hand, the motor drive circuit turns off to stop the motor.

The copier's DC-CPU monitors the rotation of the deck main motor with reference to the PLL lock signal (DMPLK); if, for some reason, the PLL lock signal remains '1' for 900 ms while the DMON is '1', it will indicate "E043" on the copier's control panel.

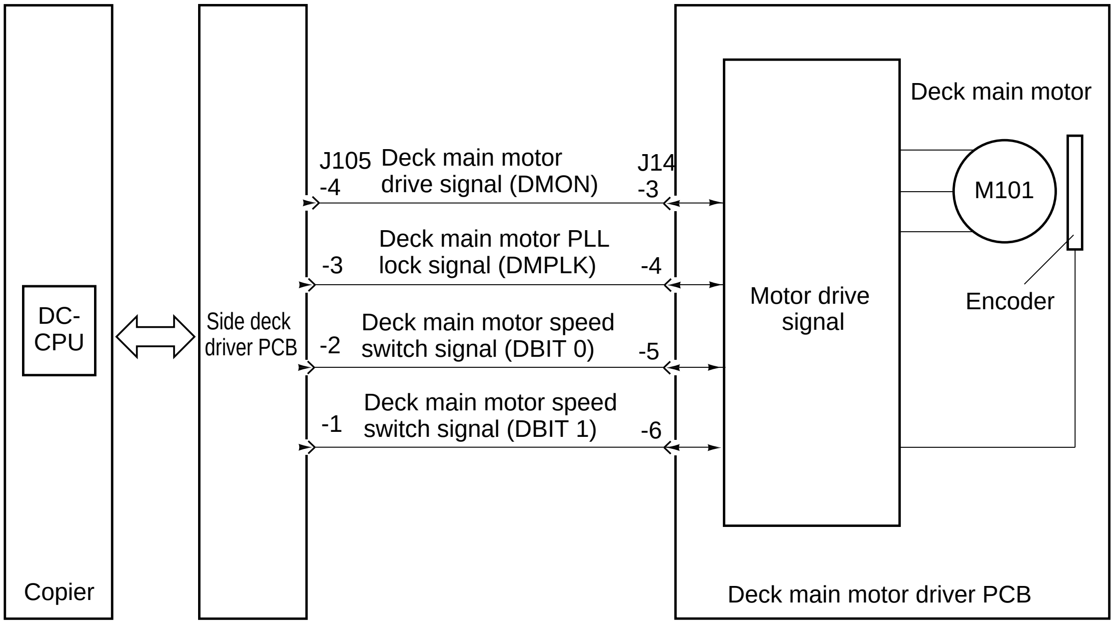

DC-CPU
Copier
Side deck driver PCB
J105
-4
Deck main motor drive signal (DMON)
J14
-3
-3
Deck main motor PLL lock signal (DMPLK)
-4
-2
Deck main motor speed switch signal (DBIT 0)
-5
-1
Deck main motor speed switch signal (DBIT 1)
-6
Motor drive signal
Deck main motor
M101
Encoder
Deck main motor driver PCB

Figure 8-110

b. Switching the Motor Rotating Speed

The deck is designed to switch its pick-up/feeding speed automatically to accommodate future copier models. The switching mechanism is triggered in response to and based on the combination of the states of the speed switch signals (DBIT0, DBIT1) sent by the copier's DC-CPU to the side deck driver PCB.

The combinations of the states of these signals are as shown in Table 8-102; and in the case of the GP40, the motor is made to rotate at medium speed.

Motor speed	Speed switch signal	
	DBIT 0	DBIT 1
High speed	L	L
Medium speed	H	L
Low speed	L	H

Table 8-102

2. Controlling the Deck Lifter Motor (M102)

The deck lifter motor control circuit is located on the side deck driver PCB. Figure 8-111 is a block diagram showing the circuit.

The combination circuit shown in the figure consists of various logic circuits, and serves to rotate the deck lifter motor clockwise/counterclockwise depending on the combination of the states of the deck lifer motor drive signal (DLMON*) and the deck lifter up signal (DLUP*) from the copier's DC-CPU.

If, for some reason, the deck lifter position sensor (PS104) does not detect the lifter within 60 sec after the deck lifter up signal has been generated, the copier's control panel will indicate "E041."

[1] Moving Up the Lifter

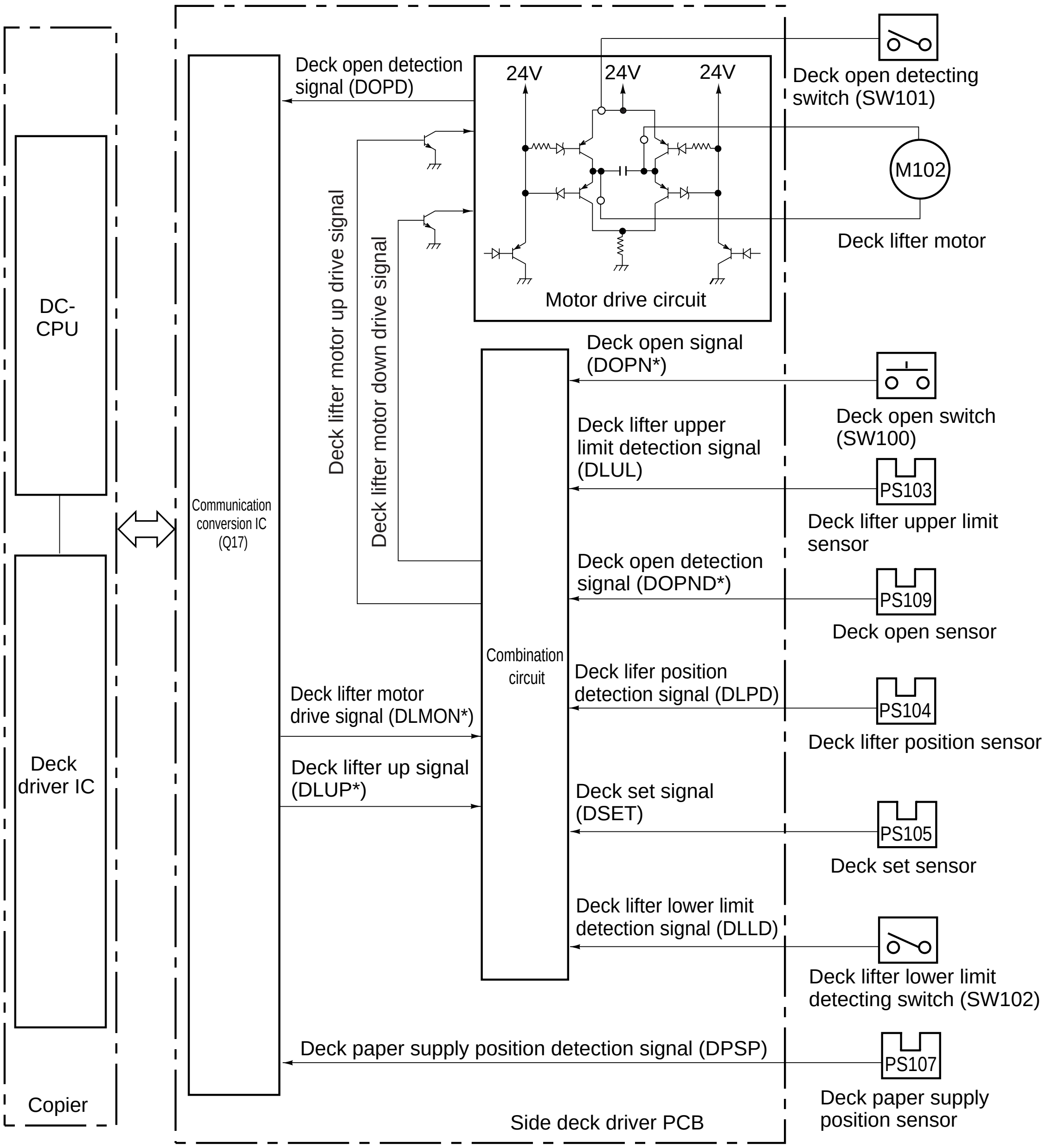
- The deck is connected to the copier, i.e., the deck set signal (DSET) is '1'.
- The deck (compartment) is closed, i.e., the deck open detection signal (DOPND*) is '1'.
- The deck (compartment) is closed, i.e., the deck open detecting switch is on.
- The deck lifter upper limit signal (DLUL) is '0' and the deck lifter position detection signal (DLPD) is '0'.
- The deck lifter drive signal (DLMON*) is '0'.
- The deck lifter up signal (DLUP*) is '0'.

The above conditions cause the lifter to move up.

[2] Moving Down the Lifter

- The deck (compartment) is open, i.e., the deck open detection signal (DOPND*) is '0'.
- The deck lifter lower limit signal (DLLD) is '0' and the deck lifter position detection signal (DLPD) is '0'.
- The deck lifter motor drive signal (DLMON*) is '0'.
- The deck lifter up signal (DLUP*) is '1'.

The above condition causes the lifter to move down.


DC-CPU
Deck driver IC
Copier
Communication conversion IC (Q17)
Deck open detection signal (DOPD)
24V
24V
24V
Deck open detecting switch (SW101)
M102
Deck lifter motor
Motor drive circuit
Deck lifter motor up drive signal
Deck lifter motor down drive signal
Deck open signal (DOPN*)
Deck open switch (SW100)
Deck lifter upper limit detection signal (DLUL)
PS103
Deck lifter upper limit sensor
Deck open detection signal (DOPND*)
PS109
Deck open sensor
Combination circuit
Deck lifer position detection signal (DLPD)
PS104
Deck lifter position sensor
Deck lifter motor drive signal (DLMON*)
Deck lifter up signal (DLUP*)
Deck set signal (DSET)
PS105
Deck set sensor
Deck lifter lower limit detection signal (DLLD)
Deck lifter lower limit detecting switch (SW102)
Deck paper supply position detection signal (DPSP)
PS107
Deck paper supply position sensor
Side deck driver PCB

Note: The communication conversion IC (Q17) is used to convert serial signals ←→ parallel signals and vice versa.

Figure 8-111

II. DETECTING JAMS

A. Outline

The side paper deck is equipped with two sensors to find out whether copy paper is moved properly (Figure 8-201). The copier's DC-CPU read the signals from these sensors at such times as programmed in advance to detect a jam. If the copier's DC-CPU detects a jam, it will discharge all sheets moving ahead of the jam, and stop the ongoing operation; it then show instructions for jam removal on the control panel.

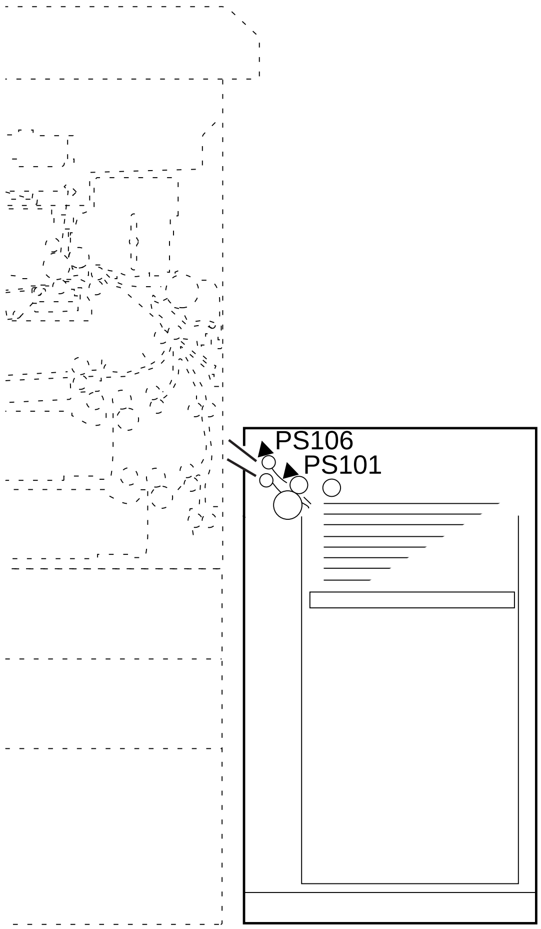


Figure 8-201

Notation	Name	Description
PS106	Deck feed sensor	Detects a delay jam.
PS101	Deck pick-up sensor	Detects a delay jam.

Table 8-201

The copiers' DC-CPU identifies a jam under the following conditions:

1. Paper is blocking the deck feed sensor (PS106) when the copier is turned on, at the end of the wait-up state, or during the standby state.

2. Deck Pick-Up/Vertical Path Delay Jam

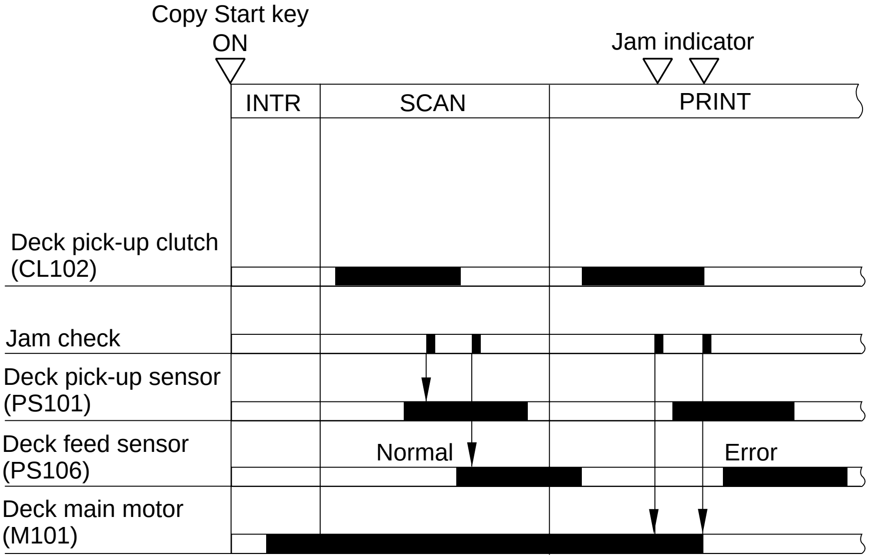

Copy Start key ON
Jam indicator
INTR
SCAN
PRINT
Deck pick-up clutch (CL102)
Jam check
Deck pick-up sensor (PS101)
Deck feed sensor (PS106)
Normal
Error
Deck main motor (M101)

Figure 8-202

III. DISASSEMBLY/ASSEMBLY

Be sure to keep the following in mind when disassembling/assembling the machine:

1. ⚠ Disconnect the copier's power plug before starting the work.
2. Unless otherwise noted, assemble the parts by reversing the steps used to disassemble them.
3. Identify the screws by type (length, diameter) and location.
4. Some mounting screws are equipped with toothed washers to protect against static electricity. Be sure to use them.
5. As a rule, do no operate the machine with any of its parts removed.
6. ⚠ If the deck is equipped with a drier heater, be sure to disconnect its power plug.

A. External Covers

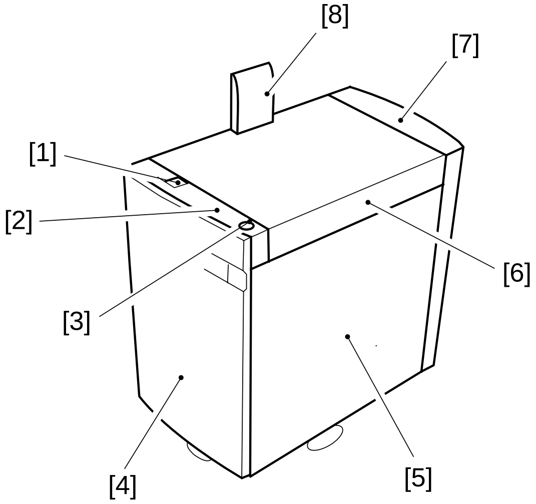


Figure 8-301

[1] Deck releasing grip
[2] Upper front cover
[3] Compartment open/close switch
[4] Front cover
[5] Right cover
[6] Upper cover
[7] Rear cover
[8] Grip cover

1. Removing the Front Cover

1) Disconnect the deck from the copier, and push down the latch plate [2] of the compartment to open the compartment [1].

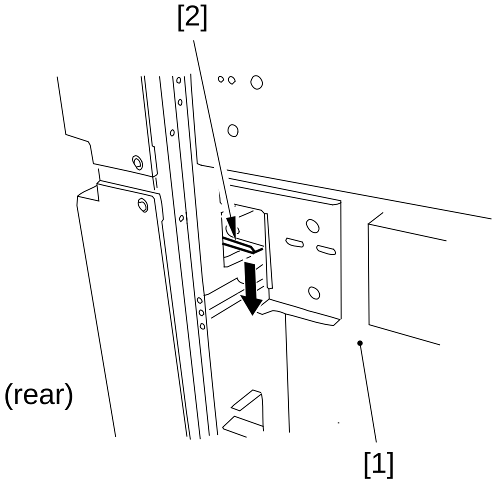


Figure 8-302

2) Loosen the four screws [3], and detach the front cover [4] of the deck to the front.

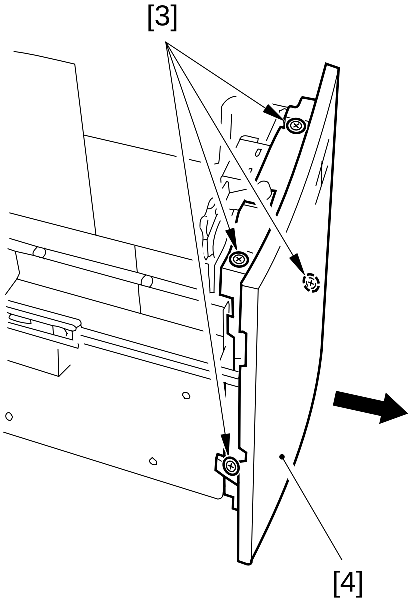


Figure 8-303

Caution:
When mounting the front cover to the deck, be sure to match the coupling for the paper level indicator.

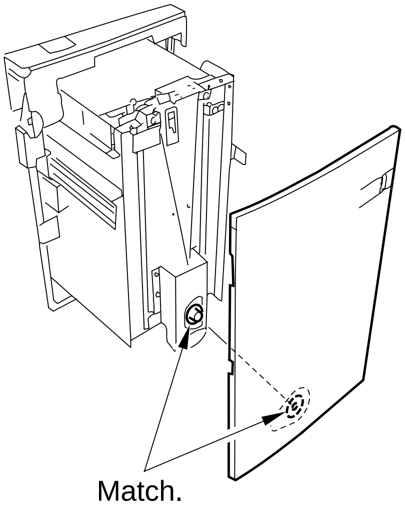


Figure 8-304

Caution:
Be sure to mount the front cover so that its distance from the upper front cover is 3 ±1 mm.

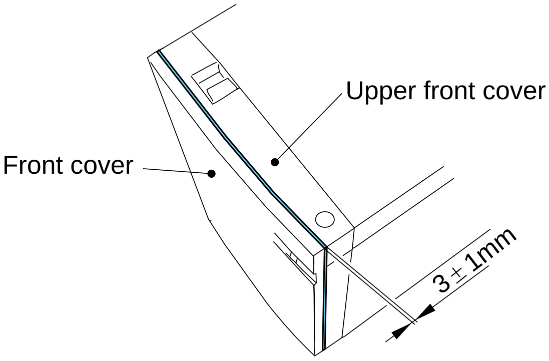

Upper front cover
Front cover
3±1mm

Figure 8-304a

Caution:
If you inadvertently moved the drive belt for the paper level indicator behind the front cover when removing the front cover, or moved the deck lifter, be sure to move down the deck lifter to its lower limit and move the drive belt manually so that the white area increases (arrow in Figure 8-305) before mounting the front cover. (Otherwise, the movement of the deck can damage the drive mechanism of the paper level indicator.)

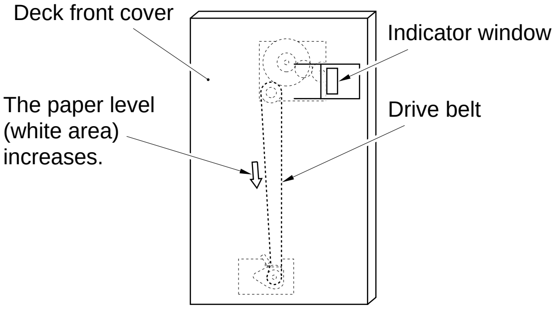

Deck front cover
Indicator window
The paper level (white area) increases.
Drive belt

Figure 8-305 (front view)

2. Removing the Rear Cover

1) Disconnect the deck from the copier, and remove the six screws [1]; then, detach the rear cover [2].

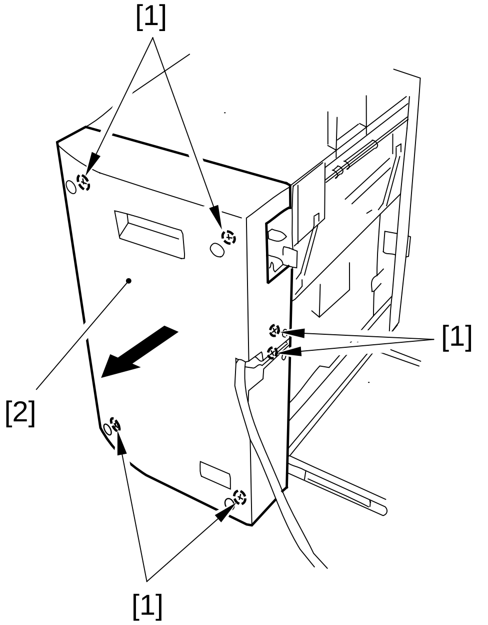


Figure 8-306

3. Removing the Right Cover

1) Remove the three screws [1], and move the right cover [2] to the front to remove it to the rear.

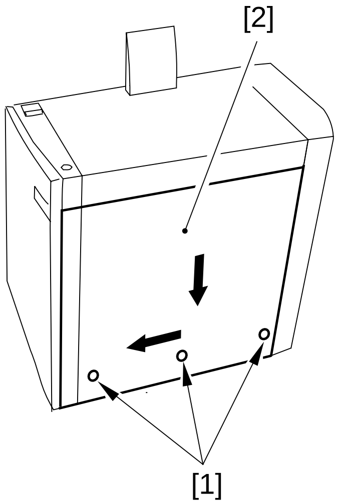


Figure 8-307

4. Removing the Upper Cover

1) Remove the rear cover. (See p. 8-23.)
2) Push down the latch plate [2] of the compartment to open the compartment [1].

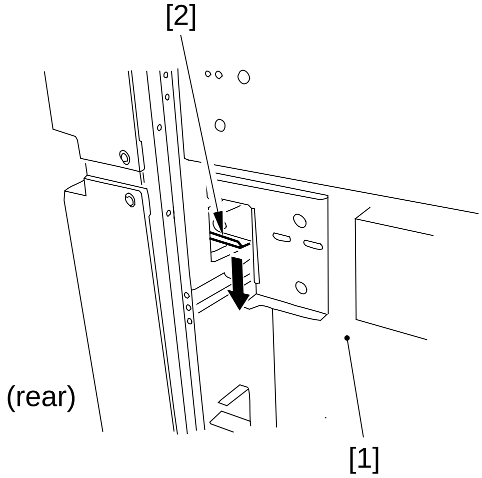


Figure 8-308

3) Remove the three screws [3], and disconnect the connector [4]; then, detach the upper front cover [5].

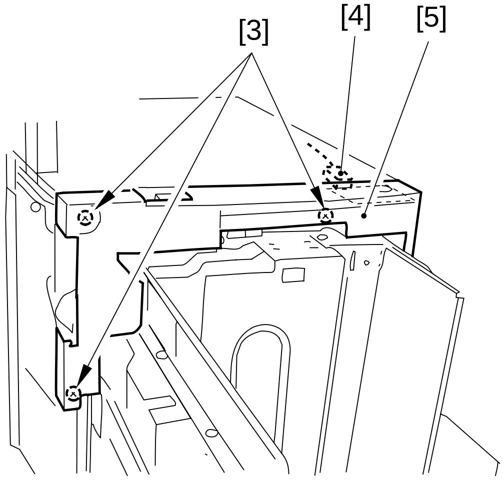


Figure 8-309

4) Close the deck vertical path assembly, and remove the two screws [6]; then, detach the upper cover [7].

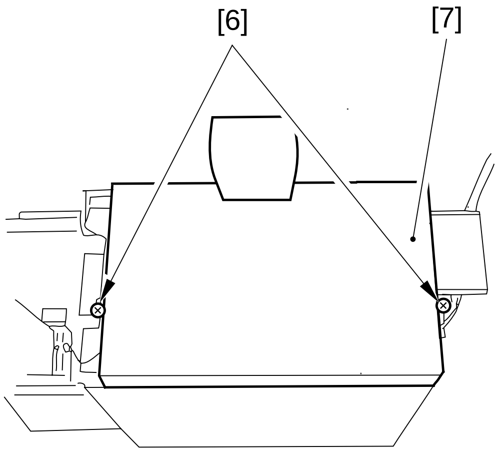


Figure 8-310

B. Paper Deck

1. Removing the Deck from the Copier

1) Place a stack of copy paper [3] (about 8 cm high) on the floor for the deck [2] (to prevent deformation of the roll support plate [1]).

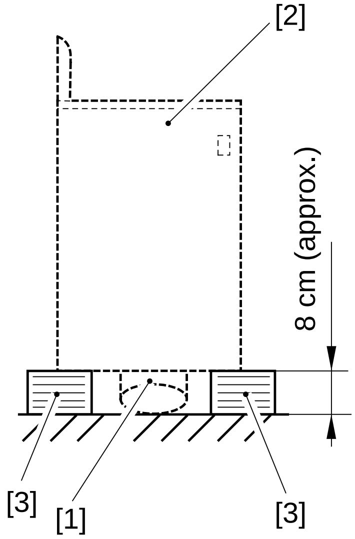


Figure 8-311

2) Remove the right cover. (See p. 8-23.)
3) As shown in Figure 8-312, match the hole in the deck lower left stay and the hole in the compartment, and insert a screwdriver [4] from inside the compartment to hold it in place.

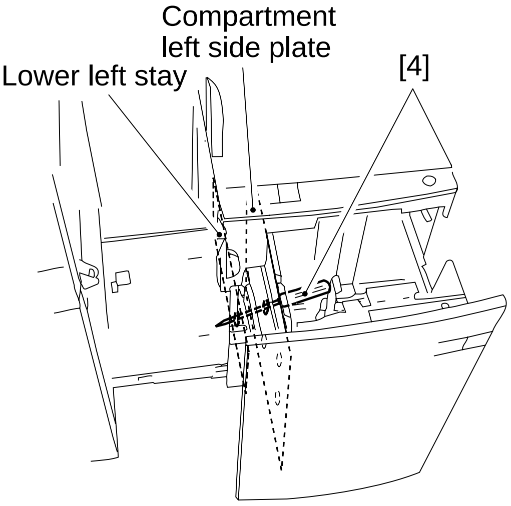


Figure 8-312

4) Remove the four screws [5], and detach the deck [6] from the deck mount [7].

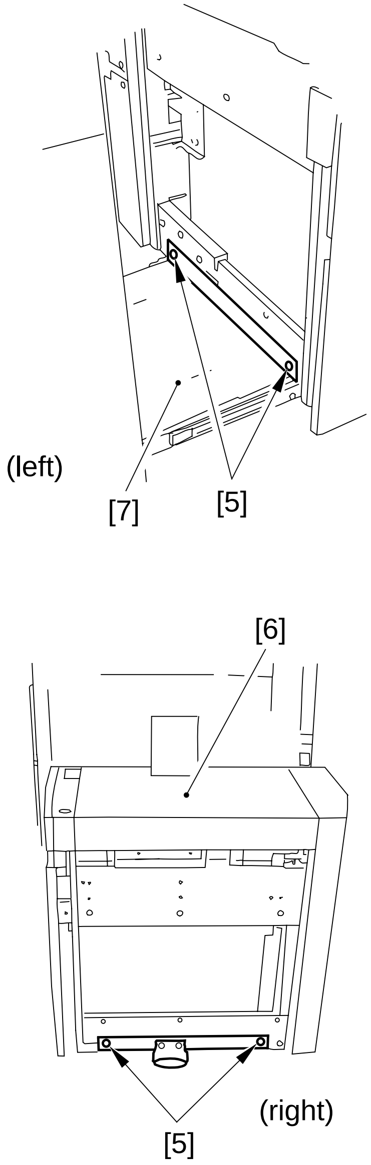


Figure 8-313

5) Holding the deck [8] as shown, place it on the stack of paper prepared in step 1).

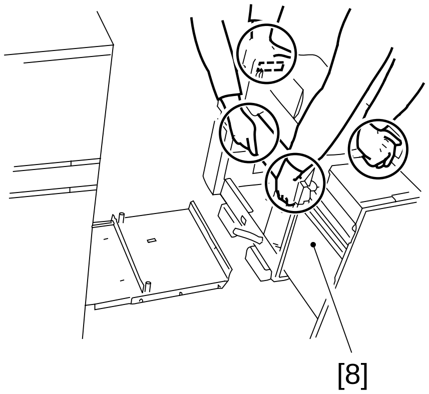


Figure 8-314

2. Removing the Compartment

1) Place a stack of copy paper [3] (about [8] cm high) on the floor for the deck [2] (to prevent deformation of the roll support plate [1]).

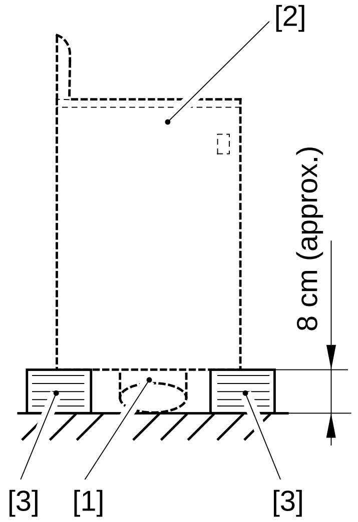


Figure 8-315

2) Detach the deck from the copier, and push down the latch plate [5] of the compartment [4] to open it.

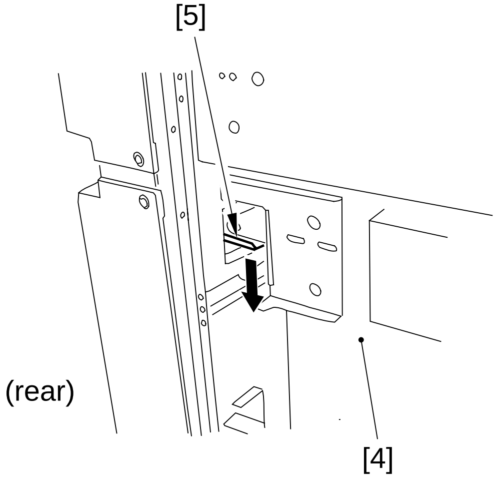


Figure 8-316

3) Remove the screw [6] and the stopper plate [7]; then, slide the compartment [8] farther to the front.

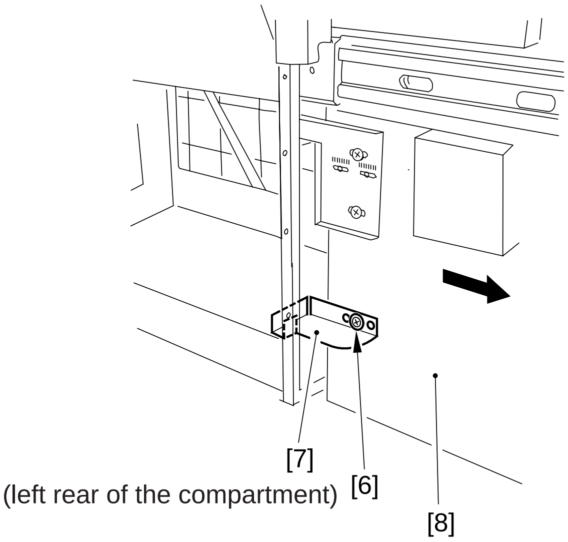


Figure 8-317

4) Remove the right cover. (See p. 8-23.)
5) Remove the screw [9] of the harness guide, disconnect the connector [10], and remove the three screws [12] (each from left and right); then, detach the compartment [8] while lifting it slightly.
6) Place the compartment [8] on the stack of paper prepared in step [1]).

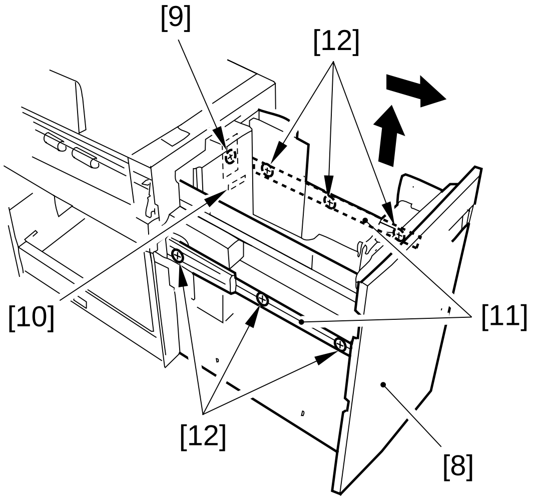


Figure 8-318

3. Changing the Deck Paper Size

If the deck paper size needs to be changed to suit the needs of the user, perform the following:

1) Open the compartment of the deck, and remove any paper.
2) If the lifer of the paper deck is up, turn on the copier's power switch, and press the sensor lever [2] of the paper supply position sensor inside the compartment [1] to move the lifter to its lower limit.

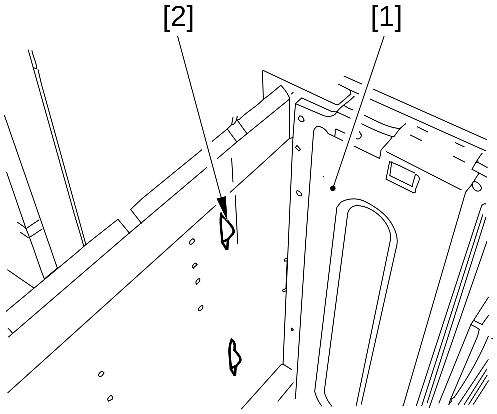


Figure 8-319

3) Remove the screw [3], and mount the paper trailing edge guide plate [4] to suit the new paper size.
4) Remove the screw [5] (one each), and mount the left and right guide plates [6] to suit the new paper size.

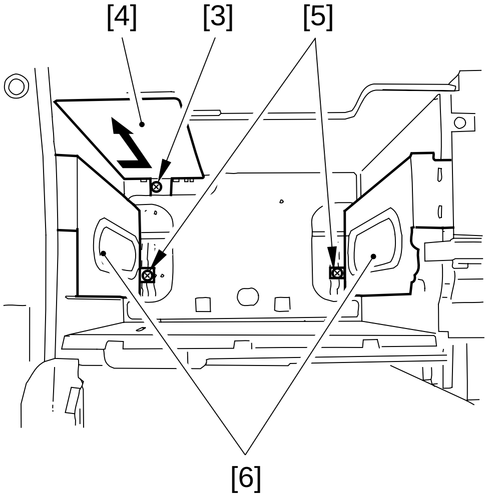


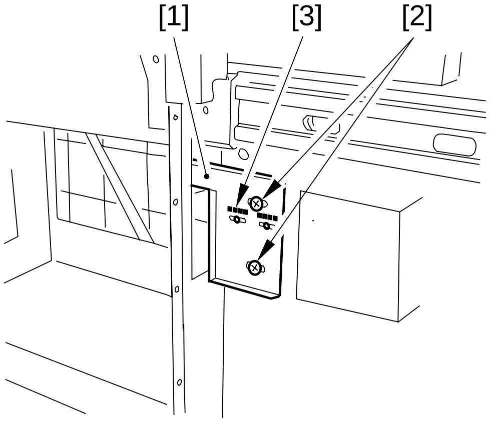
Figure 8-320

5) Enter the new paper size in the copier's service mode (OPTION>ACC>**DK-P**).

4. Adjusting the Deck Registration

If the left/right registration (0 ±1.5 mm, standard) is necessary, perform the following:

1) Slide out the compartment, and adjust the position of the latch plate [1] of the deck open solenoid (SL102) by turning the two screws [2]. (At this time, use scale [3] of the latch plate as a point of reference.)



(rear left of the compartment)

Figure 8-321

5. Adjusting the Position of the Roll

If the compartment cannot be opened/ closed smoothly, requiring adjustment of the roll at the front of the deck, perform the following:

1) Remove the front cover. (See p. 8-21.)
2) With the compartment fully slid out, turn the four mounting screws [4] on the roll support plate [3] so that the roll [1] is about 3 mm from the floor. (At this time, use scale [5] on the front plate as a point of reference.)

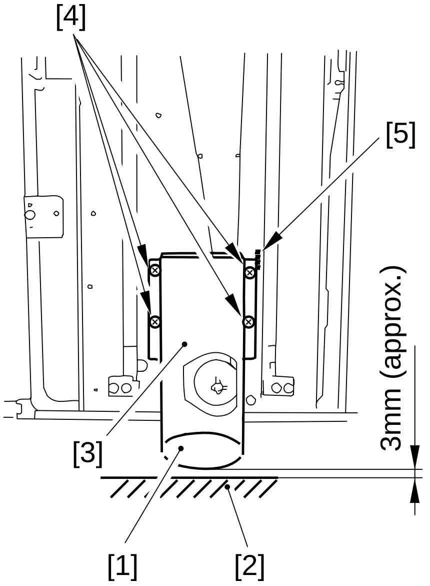


Figure 8-322

C. Drive System

1. Removing the Deck Pick-Up Clutch (CL102)

1) Remove the deck pick-up unit. (See p. 8-36.)
2) Disconnect the connector [1], and remove the E-ring [2]; then, detach the deck pick-up clutch [3].

Caution:
When mounting the pick-up clutch, be sure to fit the clutch in the slip stop [4]. Further, be sure to hook the harness on the U-groove [5].

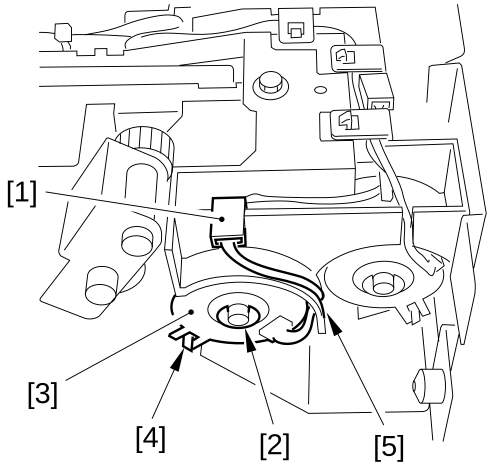


Figure 8-323

2. Removing the Deck Feeding Clutch (CL101)

1) Remove the deck pick-up unit. (See p. 8-36.)
2) Remove the harness retainer [1], disconnect the connector [2], and remove the E-ring [3]; then, detach the deck feeding clutch [4].

Caution:
When mounting the feeding clutch, be sure to fit the clutch in the slip stop [5].

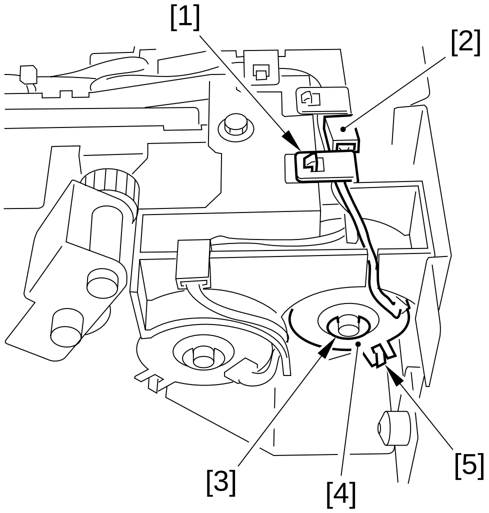


Figure 8-324

3. Removing the Deck Main Motor (M101)

1) Disconnect the deck from the copier, and remove the screw; then, detach the rear cover.
2) Disconnect the two connectors [1], and remove the four screws [2]; then, detach the deck main motor [3]. (At this time, take care not to damage the gear at the tip of the motor spindle.)

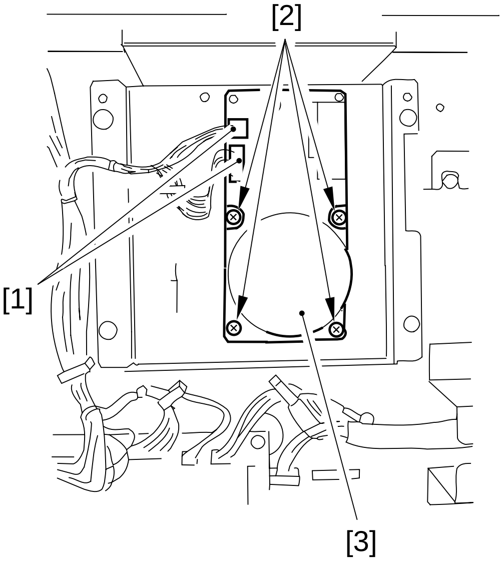


Figure 8-325

4. Removing the Deck Lifter Motor (M102)

1) Open the compartment of the deck, and remove any paper.
2) Turn on the copier's power switch. If the lifter is up, push the sensor lever [1] of the paper supply position sensor inside the compartment. Stop the lifter [2] when it is about 7 cm from the bottom plate of the compartment, and insert a hex wrench [4] into the hole in the lifter drive shaft [3] to prevent the shaft from rotating.

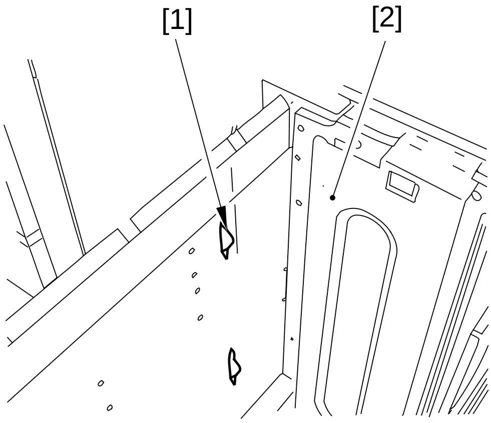


Figure 8-326

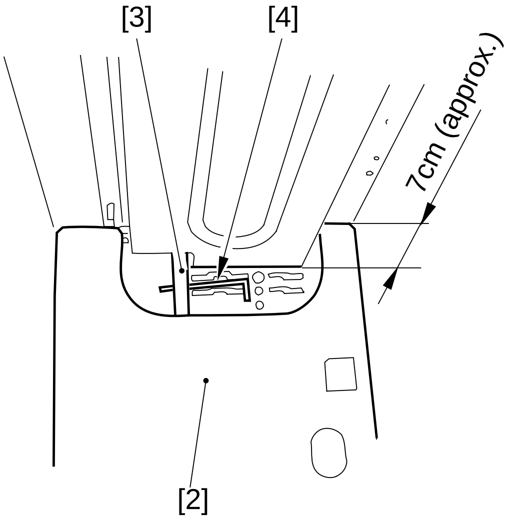


Figure 8-327

3) Detach the compartment from the deck. (See p. 8-25.)
4) Disconnect the connector [5], and remove the five screws [6]; then, detach the deck lifter motor unit [7].

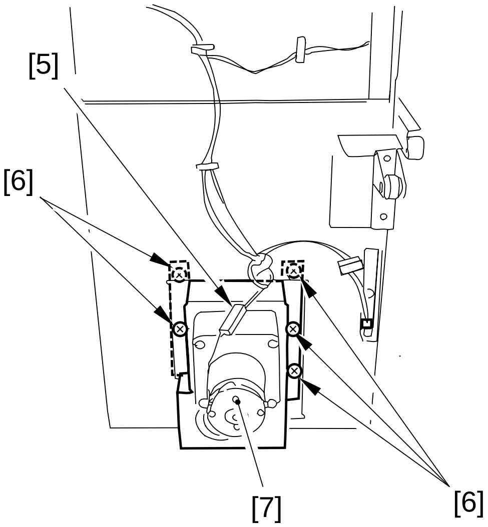


Figure 8-328

5. Removing the Lifter Cable (deck front side plate)

1) Open the compartment, and remove any paper.
2) Remove the screw, and remove the paper trailing edge guide plate from inside the compartment.
3) Push down the sensor lever [1] of the paper supply position sensor inside the compartment, and match the left and right holes in the compartment side plate and the left and right holes in the lifter; then, insert two long screwdrivers [2] for positioning the lifter.

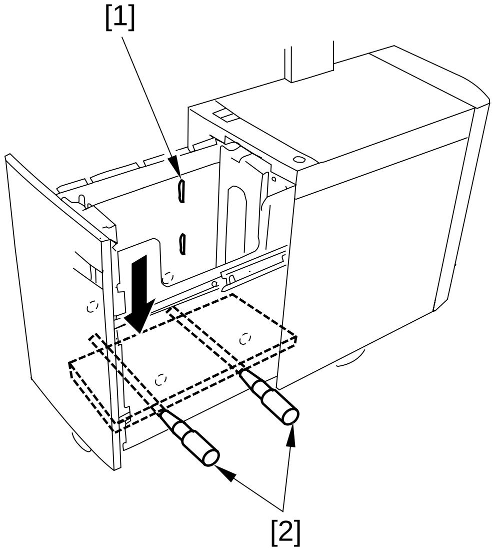


Figure 8-329

4) Remove the front cover of the deck. (See p.8-21.)
5) Remove the four screws [3], and detach the roll support plate [4].

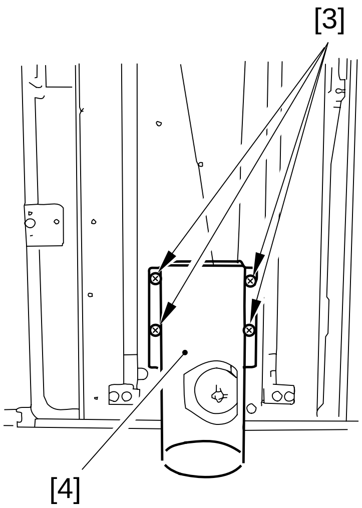


Figure 8-330

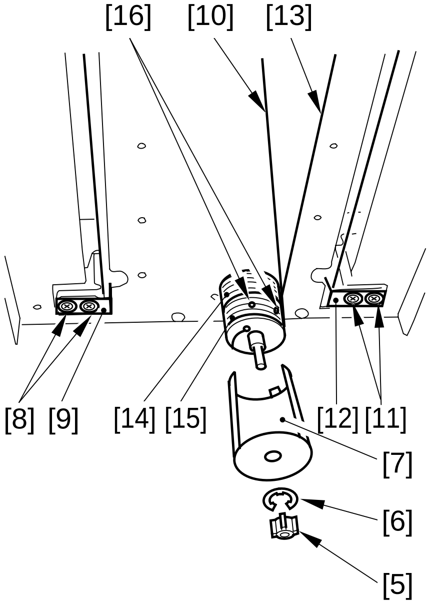


Figure 8-331

6) Remove the coupling shaft [5] and the E-ring [6]; then, detach the pulley cover [7].
7) Remove the two screws [8] and the cable fixing plate [9]; then, detach the lifter cable [10] on the outside.
8) Remove the two screws [11] and the cable fixing plate [12] on the right side; then, detach the lifiter cable [13] on the inside.
9) To detach the lifiter cable [13] from the pulley [14] on the inside, remove the two set screws 1 [16] of the pulley [15] on the outside, and detach the pulley [15] on the outside.

6. Removing the Lifter Cable (deck rear)

1) Open the compartment, and remove any paper.
2) Remove the screw, and remove the paper trailing edge guide plate from inside the compartment.
3) Push down the sensor lever [1] of the paper supply position sensor inside the compartment, and match the left and right holes in the compartment side plate and the left and right holes in the compartment side plate; then, insert two long screwdrivers [2]. (At this time, try to match the top face of the lifter to the marking line on the left side late of the compartment to facilitate the work.)

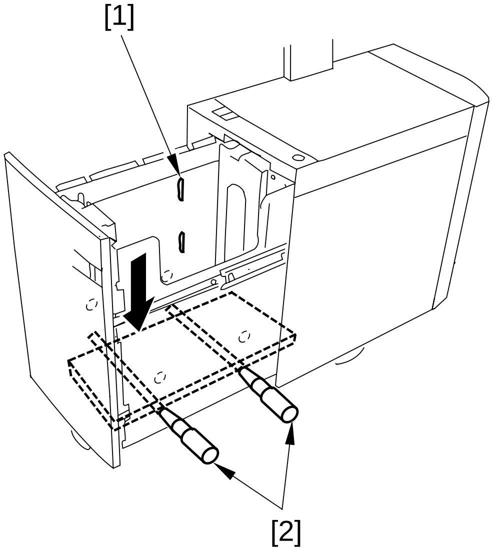


Figure 8-332

4) Detach the compartment. (See p. 8-25.)
5) Remove the screw [3], and detach the sensor plate [4].
6) Remove the screw [5] (one each), and remove the upper and lower sensor covers [6].
7) Disconnect the five connectors [7], and remove the five screws [8]; then, detach the metal plate [9].

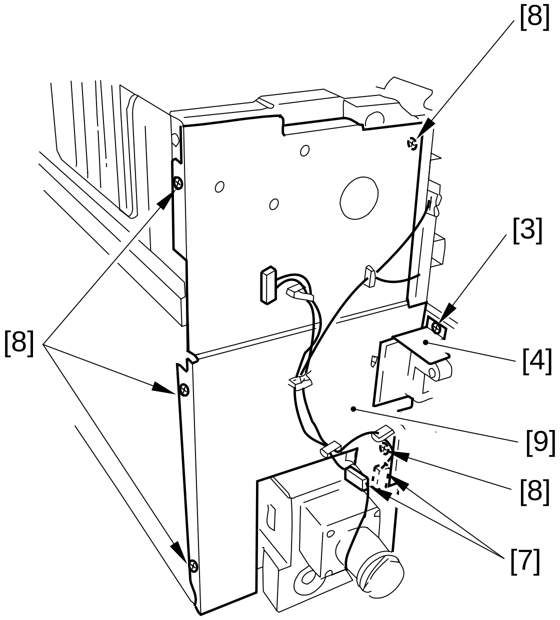


Figure 8-333

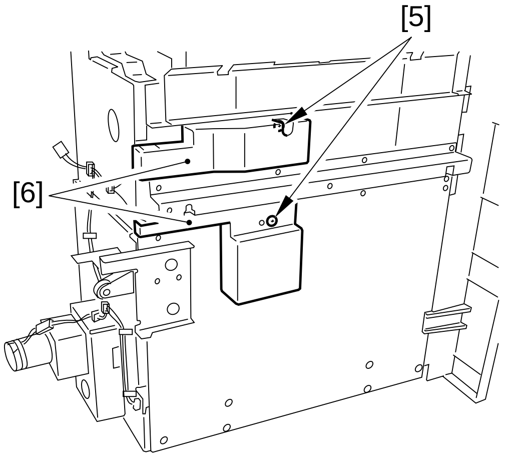


Figure 8-334

8) Insert a hex wrench into the hole of the lifter drive shaft [10] to prevent it from rotating as shown.

Caution:
If you fail to perform step 8), the lifter cable will slack when you remove the lifter motor.

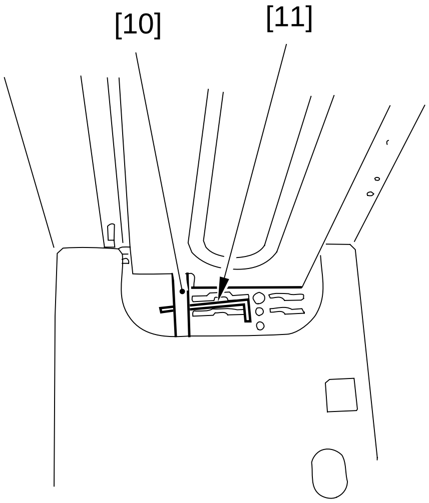


Figure 8-335

9) Remove the five screws [12], and detach the lifter motor unit [13].

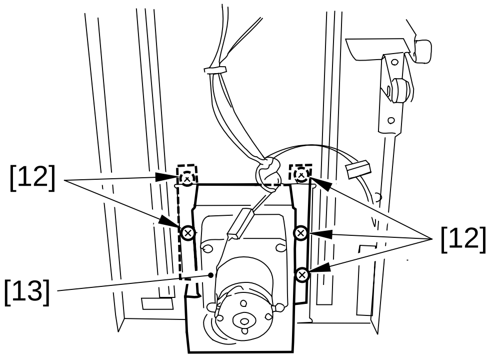


Figure 8-336

7. Routing the Lifter Cable

1) Check to make sure that the lifter drive shaft and the lifter are held in position by a hex wrench [1] and screwdrivers [2], respectively.
2) Secure the lifter fixing plate [3] in place to the lifter with two screws.
3) Hook the lifter cable on the pulley [4].
4) Hook the ball of the lifter cable on the pulley [5] of the lifter drive shaft; then, wind it along the pulley groove about 1.5 times. (At this time, be sure to keep the lifter cable taut so that the long screwdrivers are slightly pulled up.)
5) Secure the pulley in place to the lifter drive shaft with two set screws [6].
6) Secure all pulleys to the lifter drive shaft; then, measure the distance between the bottom plate of the compartment to the top face of the lifer to make sure that the lifter is level.

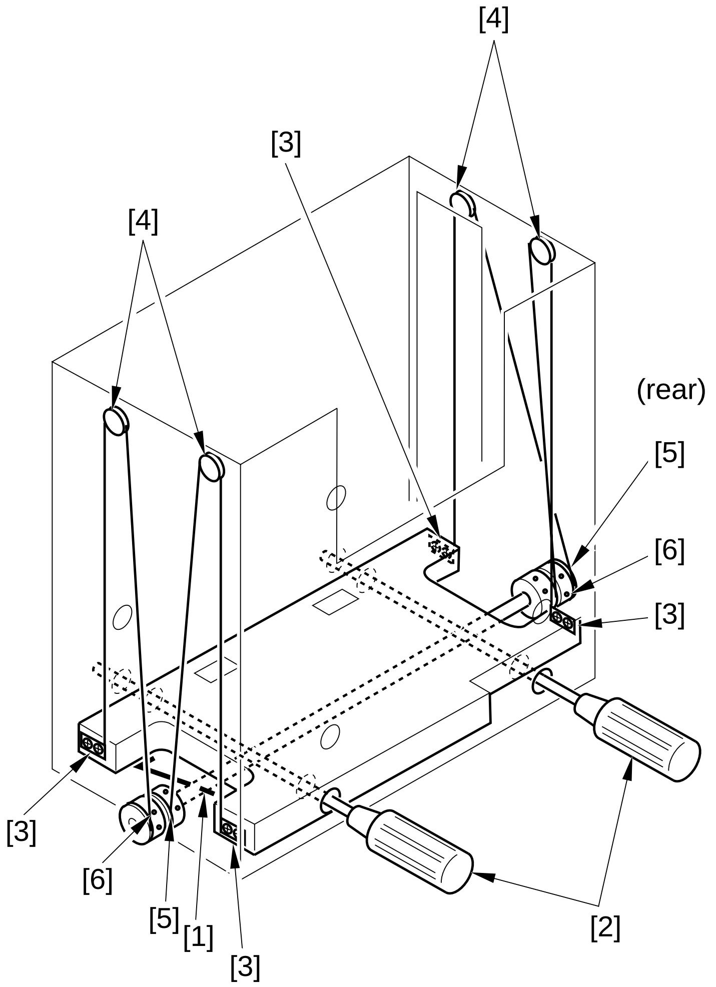


Figure 8-337

D. Feeding System

1. Removing the Deck Pick-Up Unit

1) Remove the upper cover. (See p. 8-23.)
2) Disconnect the two connectors [1], and remove the five screws [2].
3) Remove the deck pick-up unit [3].

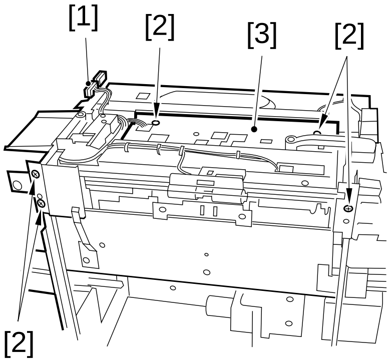


Figure 8-338

Caution:
When mounting the deck pick-up unit [3], be sure to tighten the three screws shown in Figure 8-339 first.

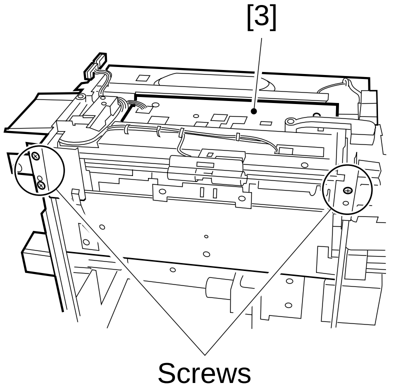


Figure 8-339

2. Removing the Deck Pick-Up Roller

1) Remove the deck pick-up unit. (See p. 8-36.)
2) Turn over the deck pick-up unit, and remove the resin ring [1] (one each); then, detach the deck pick-up rollers [2].

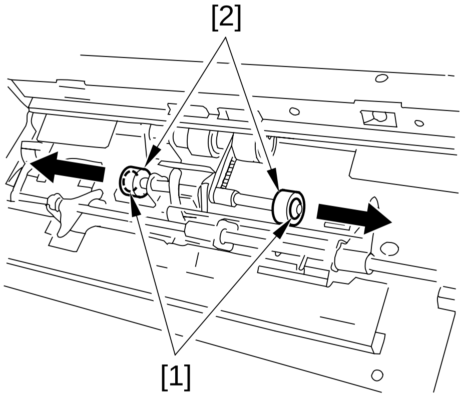


Figure 8-340

3. Orientation of the Deck Pick-Up Roller

When mounting the deck pick-up roller [1] at the front, be sure that the marking [2] on the collar (silver) is toward the front and the marking [3] on the side of the roller is toward the rear.

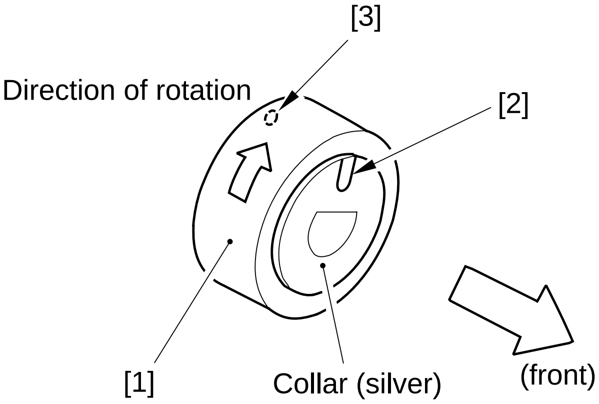


Figure 8-341

When mounting the pick-up roller [4] at the rear, be sure that the marking [5] on the side of the roller and the marking [6] on the collar (gold) are toward the rear.

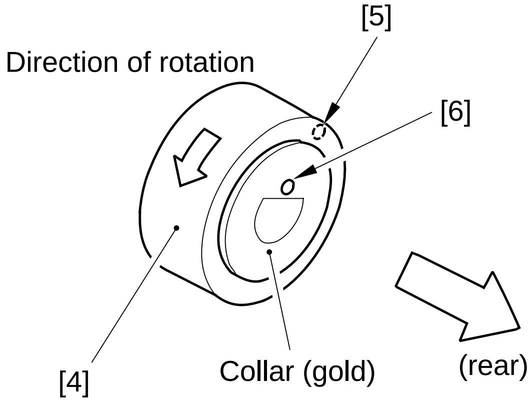


Figure 8-341a

4. Removing the Deck Pick-Up/Feeding Roller

1) Remove the deck pick-up unit. (See p. 8-36.)
2) Turn over the deck pick-up unit.
3) Remove the resin ring [1], and move the deck pick-up/feeding roller [2] and the drive belt [3] to the front to remove.

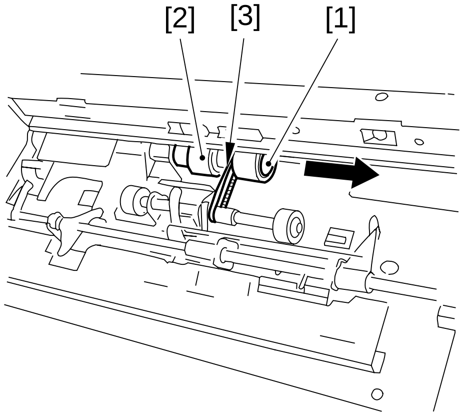


Figure 8-342

5. Orientation of the Deck Pick-Up/ Feeding Roller

When mounting the deck pick-up/feeding roller [1], be sure that the belt pulley [2] is toward the front.

When mounting the pick-up/feeding roller rubber to the pick-up/feeding roller shaft, be sure that the marking [3] is toward the rear.

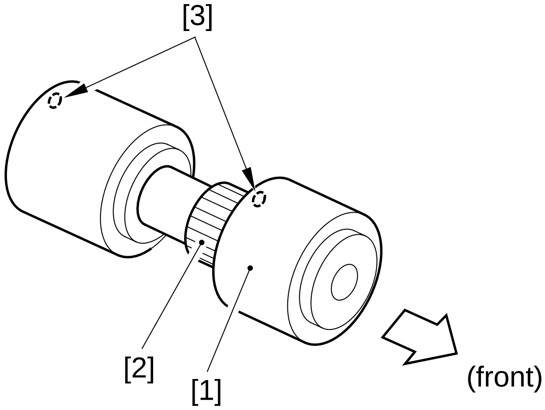


Figure 8-343

6. Removing the Deck Separation Roller

1) Disconnect the deck from the copier, and remove the two screws [1]; then, detach the separation roller support plate [2].
2) Remove the joint, and detach the deck separation roller [3].

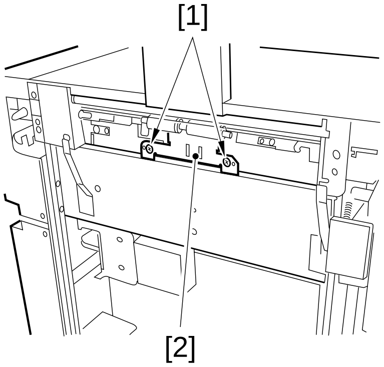


Figure 8-344

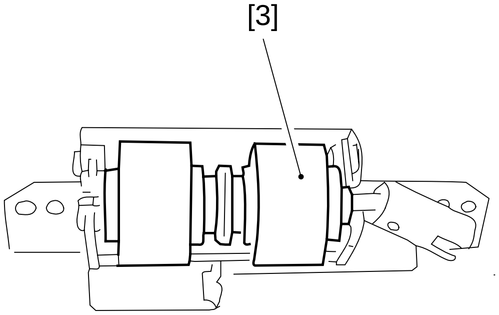


Figure 8-344a

Caution:
The urethane sponge used for the deck separation roller is pink initially, and changes in color to orange and then to yellow, faster if exposed to light. This is a characteristic of the urethane sponge, and there is no different in performance, and parts are not identified by color.

7. Adjusting the Deck Separation Roller Pressure

If double feeding or pick-up failure occurs when the deck is used as the source of paper, change the position of the deck separation roller pressure spring:

- If pick-up failure occurs, move the spring in the direction of A.
- If double feeding occurs, move the spring in the direction of B.

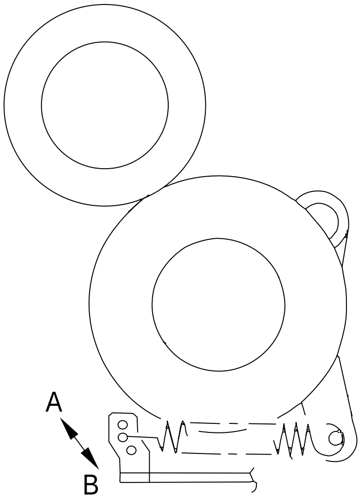


Figure 8-345

8. Position of the Deck Pick-Up Roller Releasing Solenoid

Before removing the deck pick-up roller releasing solenoid [1] from the support plate, take note of the positions of the two fixing screws [2] on the solenoid; or, mark the position of the solenoid on the support plate with a scriber.

If you are replacing the solenoid on its own, be sure to secure it in its initial position.

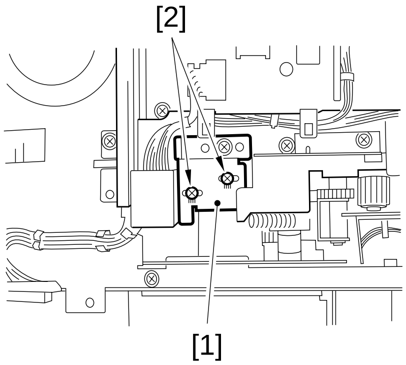


Figure 8-346

E. Electrical System

1. Removing the Side Deck Driver PCB

1) Disconnect the deck from the copier, and remove the six screws; then, detach the rear cover.
2) Disconnect the nine connectors [1], and remove the two screws; then, remove the deck driver PCB [3].

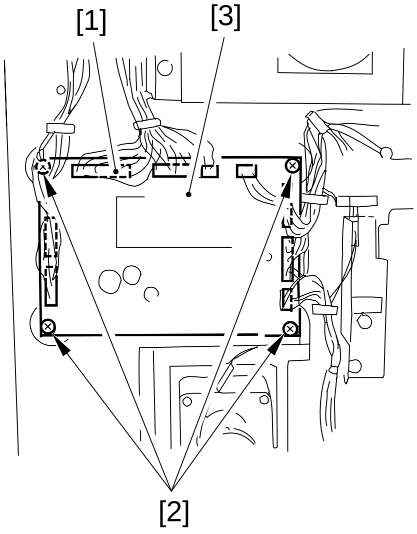


Figure 8-347

2. Removing the Open Switch PCB

1) Disconnect the deck from the copier, and push down the latch plate [2] of the compartment [1] to open the compartment.

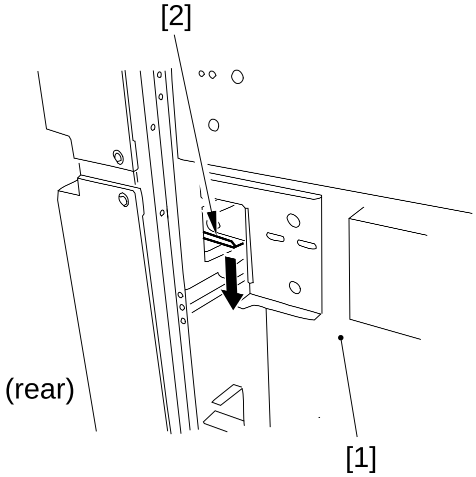


Figure 8-348

2) Remove the three screws [3], and disconnect the connector [4]; then, detach the upper front cover [5].

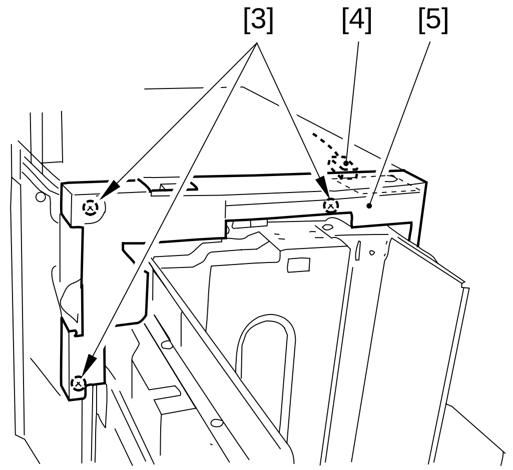


Figure 8-349

3) Remove the two screws [6], and detach the open switch PCB [7].

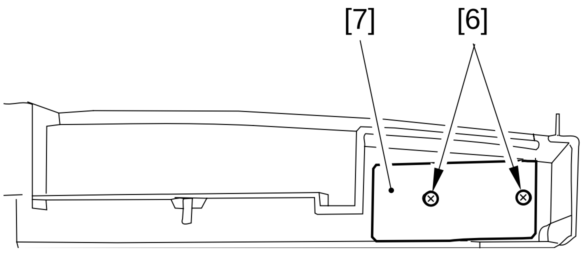


Figure 8-350

Caution:

When mounting the upper front cover, be sure that it is not trapped by the open switch PCB and all connectors are connected correctly.

CHAPTER 9

FIXING SYSTEM

I. OUTLINE OF OPERATIONS 9-1
   A. Outline 9-1
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I. OUTLINE OF OPERATIONS

A. Outline

Table 9-101 shows the major functions of the fixing assembly, whileg Figure 9-101 shows the major parts of the assembly.

Item	Description
Method	Hating roller
Fixing drive	Fixing motor (M2)
Fixing heater	Main heater: 700 W Sub heater: 600 W
Fixing temperature detection	By main thermistor (TH1) and sub thermistor (TH2)
Cleaner	Cleaning belt • good for 160,000 sheets (A4, LTR) • driven by the cleaning belt drive solenoid (SL5) Activation timing: every time the trailing edge of paper passes through the fixing roller assembly. Operations: 3 times for A4/LTR or less (including A4/LTR) 4 times for paper lager than A4/LTR
Protective functions	Error detection is executed by the following, and the power to the fixing heater is shut down upon detection. • Thermal switch • SSR short circuit • Main thermistor (TH1) temperature • Sub thermistor (TH2) temperature
Error code	E000 Main thermistor overheating detection E001 Sub thermistor overheating/open circuit detection E002 Fixing temperature failing to reach a specific level E003 Fixing temperature falling to an abnormal level E004 SSR short circuit E005 Absence of the cleaning belt E014 Fixing motor rotation fault
Service mode (major)	DISPLAY>ANALOG>**FIX-C** fixing temperature DISPLAY>**ERROR** error history display FUNCTION>FIXING>**NIP-CHK** nip measurement FUNCTION>CLEAR>**ERROR** error initialization OPTION>BODY>**TEMPCOM2** thick paper temperature control mode switch OPTION>USER>**WEB-DISP** cleaning belt alarm display switch COUNTER>MISC>**FIX-WEB** cleaning belt counter reading initialization

Table 9-101 Major Functions of the Fixing Unit

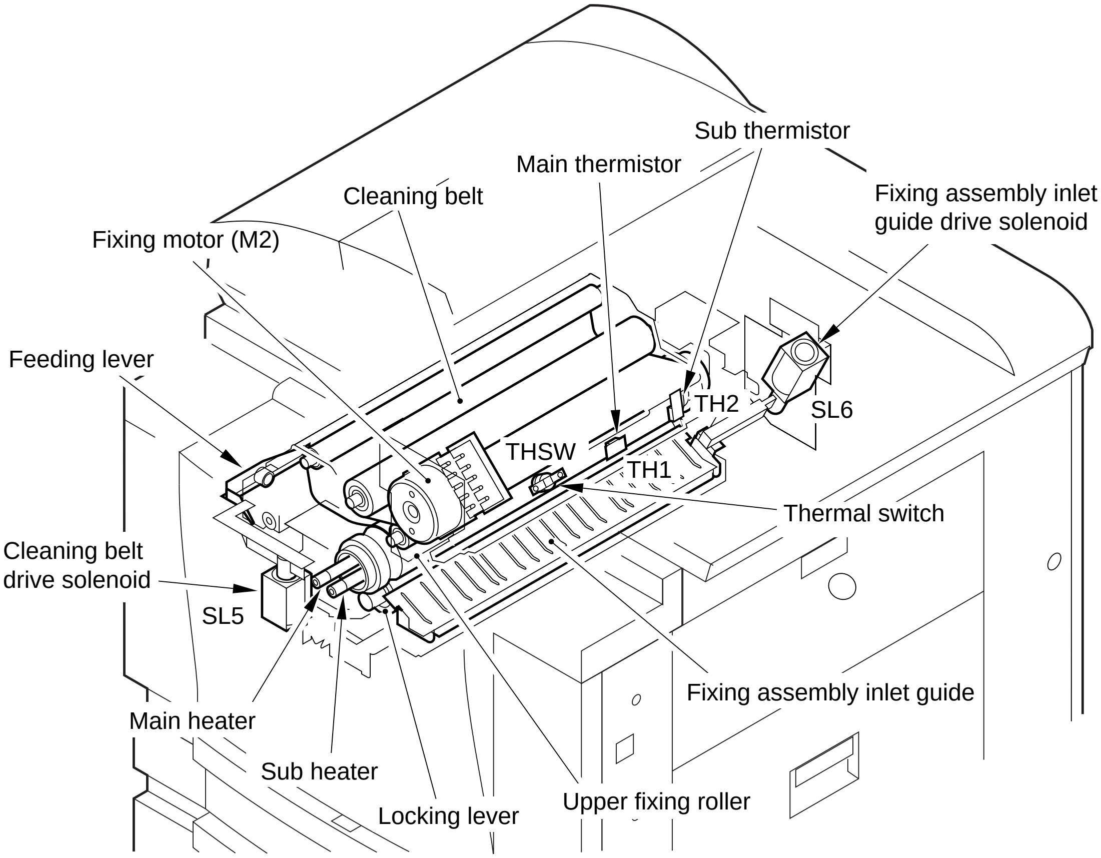
Sub thermistor
Main thermistor
Cleaning belt
Fixing assembly inlet guide drive solenoid
Fixing motor (M2)
Feeding lever
TH2
SL6
THSW
TH1
Thermal switch
Cleaning belt drive solenoid
SL5
Fixing assembly inlet guide
Main heater
Sub heater
Locking lever
Upper fixing roller

Figure 9-101 Parts of the Fixing Assembly Functions

B. Fixing Drive Assembly

Figure 9-102 shows the drive system of the fixing assembly.

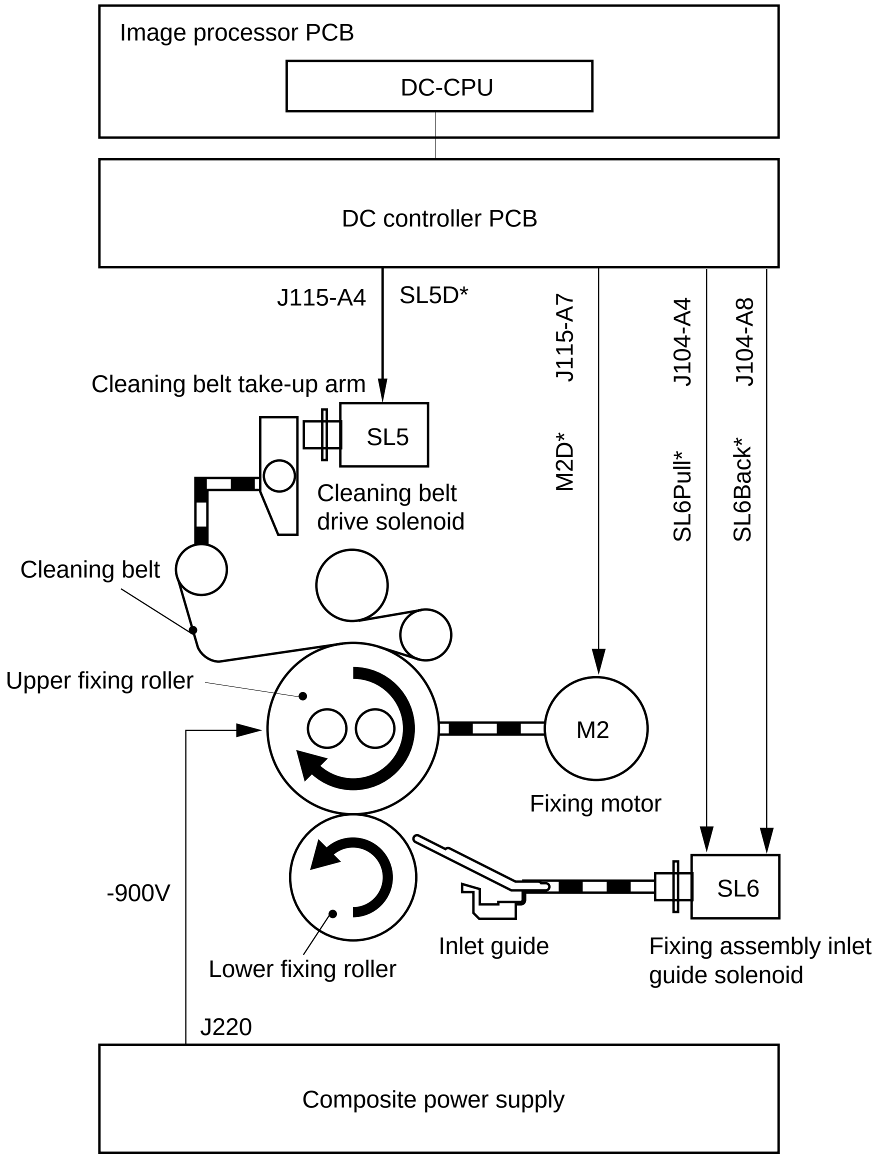
Image processor PCB
DC-CPU
DC controller PCB
J115-A4
SL5D*
J115-A7
M2D*
J104-A4
SL6Pull*
J104-A8
SL6Back*
Cleaning belt take-up arm
SL5
Cleaning belt drive solenoid
Cleaning belt
Upper fixing roller
M2
Fixing motor
-900V
SL6
Lower fixing roller
Inlet guide
Fixing assembly inlet guide solenoid
J220
Composite power supply

Figure 9-102 Fixing Assembly Drive System

1. Cleaning Belt Drive Solenoid (SL5)

The cleaning belt drive solenoid is driven a specific period of time after the registration paper sensor turns on, and it operates each time the trailing edge of paper moves past the fixing assembly.

The number of times it turns on varies according to the size of paper, and the resulting number enables the detection of the length of the cleaning belt (indicated by two different messages).

a. Warning Indication

Item	Description
Display timing	When the cleaning belt count reaches 360,000 (as detected by the DC-CPU; equivalent of 1450,000 sheets of A4).
Display	When the copier enters servile mode while the display is on, it brings up the Warning screen, which may be closed by pressing the OK key. Operate as follows to enable display of the Warning message switch on the User screen: OPTION>USER>**WEB-DISP** 0: Disable display of the warning on the User screen. (default) 1: Enable display of the warning on the User screen. • For the service person, "Replace the Cleaning Belt." • For the user, "The Belt Is Out."
Remaining length	The length of the cleaning belt at time of the warning is good for about 15,000 copies of A4.
Remedy	Replace the cleaning belt as needed. Be sure to initialize the cleaning belt reading after replacement (COUNTER>MISC>**FIX-WEB**). Note: The cleaning belt counter operates as part of the software, requiring initialization only after replacement of the cleaning belt.

b. Error Code E005

The copier remains not ready while this code is indicated, requiring immediate servicing.

Item	Description
Display timing	When the cleaning belt count reaches 480,000 (as detected by the DC-CPU; equivalent of about 160,000 of A4).
Remedy	Replace the cleaning belt. After replacement, be sure to initialize the cleaning belt count (COUNTER>MISC>**FIX-WEB**).

2. Main Heater (H1) and Sub Heater (H2)

	Main heater (H1)	Sub heater (H2)
Heat distribution	High in the middle	High at ends
Power consumption	700W	600W

3. Fixing Assembly Inlet Solenoid (SL6)

The copier adjusts the height of the fixing assembly inlet guide to suit the selected paper size using the fixing assembly inlet solenoid to improve feeding. (Figure 9-102)

	Fixing assembly inlet solenoid (SL6)	Height of the fixing inlet guide
B5R (exclusive) to postcard size	The solenoid drive signal turns on only when the height of the fixing assembly inlet guide needs to be changed. • A specific period of time after the registration clutch turns on (immediately before paper moves into the fixing assembly), → SL6 pull signal turns on. • When the trailing edge of paper leaves the internal delivery sensor, → SL6 back signal turns on.	Down
A3 to 5R (inclusive)	Off (normal)	Up

C. Controlling the Fixing Temperature

1. Outline

The temperature of the copier's upper fixing roller is monitored by the main thermistor (TH1) and the sub thermistor (TH2), and is controlled by the DC-CPU*, which varies the main heater drive signal (H1-D) and the sub heater drive signal (H2-D) according to the levels of TH1 and TH2.

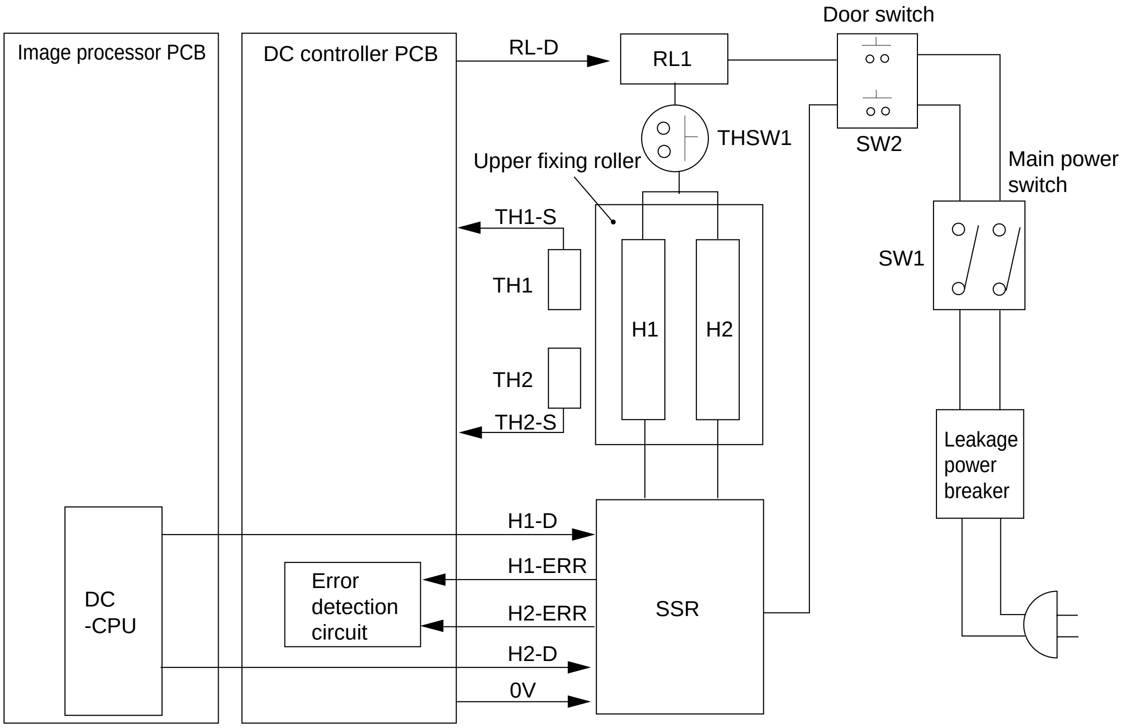
Image processor PCB
DC controller PCB
RL-D
RL1
Door switch
SW2
THSW1
Upper fixing roller
Main power switch
SW1
TH1-S
TH1
TH2
TH2-S
H1
H2
Leakage power breaker
H1-D
H1-ERR
H2-ERR
H2-D
0V
Error detection circuit
SSR
DC -CPU

Figure 9-103 Major Parts Used for Fixing Temperature Control

2. Details of Temperature Control

The copier executes temperature control as follows according tot the environmental conditions at main power -on and the type of transfer medium. The following table shows the control temperature and printing conditions in each mode:

Outline of Temperature Control

- Normal Mode

		Control temperature		Effective temperature	Remarks
		Standby	Printing		
At power-on (main power)	Normal mode (18°C or more)	190°C	195°C	190°C	When the temperature of the fixing roller has reached 190°C, initial multiple rotation is executed for 5 sec, enabling printing operation.
	L mode* (less than 18°C)				When the temperature of the fixing roller has reached 190°C, initial multiple rotation is executed for 20 sec, enabling printing operation.
During temperature control	Normal mode				
	Thick paper mode (manual feed)			195°C	For each job, initial multiple rotation is executed during the period from 190°C to 195°C. (Thick paper mode may be selected on the screen designed for the selection of manual feed paper size.)

* If the ambient temperature when the main power is turned on is 18°C or less.

- OPTION>BODY>**TEMCON2** = 2
  (Enhanced fixing is selected.)

		Control temperature		Effective temperature	Remarks
		Standby	Printing		
At power-on (main power)	Normal mode (18°C or more)	195°C	200°C	195°C	When the temperature of the fixing roller has reached 190°C, initial multiple rotation is executed for 5 sec, enabling printing operation.
	L mode* (less than 18°C)				When the temperature of the fixing roller has reached 190°C, initial multiple rotation is executed for 20 sec, enabling printing operation.
During temperature control	Normal mode				
	Thick paper mode (manual feed)			200°C	For each job, initial multiple rotation is executed during the period from 190°C to 195°C. (Thick paper mode may be selected on the screen designed for the selection of manual feed paper size.)

- OPTION>BODY>**ELC-PWR** = '1'
  (The down sequence will be as follows; this mode is valid in 120-V areas only, and is invalid in 230-V areas.)

		Control temperature		Effective temperature	Number of copies	Remarks
		Standby	Printing			
20 min after power-on (main power)	Environment temperature 18°C or higher	190°C	195°C	190°C	40cpm/ 33cpm	When the temperature of the fixing roller has reached 190°C, initial multiple rotation is executed for 20 sec, enabling printing operation.
	Environment temperature is 12°C < x 18°C				1.31cpm 2.40/ 33cpm**	When the temperature of the fixing roller has reached 190°C, initial multiple rotation is executed for 20 sec, enabling printing operation.
	Environment temperature is 12°C or less				31cpm	When the temperature of the fixing roller has reached 190°C, initial multiple rotation is executed for 20 sec, enabling printing operation.
During temperature control	Normal mode					
	Thick paper mode (manual feed)			195°C	195°C	For each job, initial multiple rotation is executed during the period from 190°C to 195°C. (Thick paper mode may be selected on the screen designed for the selection of manual feed paper size.)on the screen designed for the selection of manual feed paper size.)

** For 20 min after power-on, 31 cpm; thereafter, 40/33 cpm.

- Power Save Mode

The fixing temperature selected from three settings in user mode will be used. A press on the Save Power key will start power save mode, lowering the fixing temperature to a specific level (sleep state).

1. 155°C (Save Power key -10%)
2. 125°C (Save Power key -25%)
3. 95°C (Save Power key -40%)

Standby: 180°C

- Thick Paper Mode

1. Place thick paper in the special cassette, and select the Thick Paper icon in user mode.
   Related service mode: COPIER>OPTION>BODY>**TEMPCON2**
2. Set thick paper on the multifeeder tray, and select Thick Paper.
   Related service mode: COPIER>ADJUST>HV-TR>**TR-SPP**

D. Protective Mechanism for the Fixing System

To prevent overheating of the fixing heater, the copier is equipped with the protective mechanisms shown in Table 9-102. The DC-CPU* checks for an error in each assembly; and, upon detection of an error, it will cut off the relay RL1 and, at the same time, indicate an error code on the LCD.

If the fax function board is installed, however, the copier will not turn off the main power, since doing so would erase image data.

To reset the copier in response to any of the following error codes, execute error clear in service mode (FUNCTION>CLAER>**ERROR**)

* CPU for the DC controller PCB (on the image processor PCB).

Item	Error code	Description
The main thermistor (TH1) temperature reading does not increase.	E000	The main thermistor temperature reaching fails to reach 55°C 45 sec after the main power switch has been turned on.
The main thermistor (TH1) temperature dose not increase after a specific period of time.	E002	The output of the thermistor meets the following: • 31 sec or more after detection of 40°C to detection of 75°C. • 23 sec or more after detection of 75°C to detection of 100°C. • 19 sec or more after detection of 100°C to detection of 120°C. • 19 sec or more after detection of 120°C to detection of 140°C. • 19 sec or more after detection of 140°C to detection of 160°C. • 15 sec or more after detection of 160°C to detection of 170°C.
The main thermistor (TH1) detects overheating.	E001	This error is identified when the output of the main thermistor exceeds 220°C; in response, the relay drive signal (RL-D) will be turned off to shut off the relay (RL1).
The sub thermistor (TH2) detects overheating has an open circuit.	E001	This error is identified when the output of the sub thermistor exceeds 235°C; in response, the relay drive signal (RL-D) will be turned off to shut off the relay (RL1). Overheating is detected by the sub thermistor, and the sub thermistor is checked for an open circuit.
The thermistor (TH1, TH2) detects an abnormal drop in temperature.	E003	The thermistor detects a drop below 100□‹C after the wait period.
The SSR has a short circuit.	E004	This error is detected when any of the following occurs as a result of a short circuit in the SSR; in response, the relay drive signal (RL-D) will be turned off to shut off the relay (RL1): • The fixing heater continues to remain on. • The fixing temperature increases abnormally.

Table 9-102 Protective Mechanisms

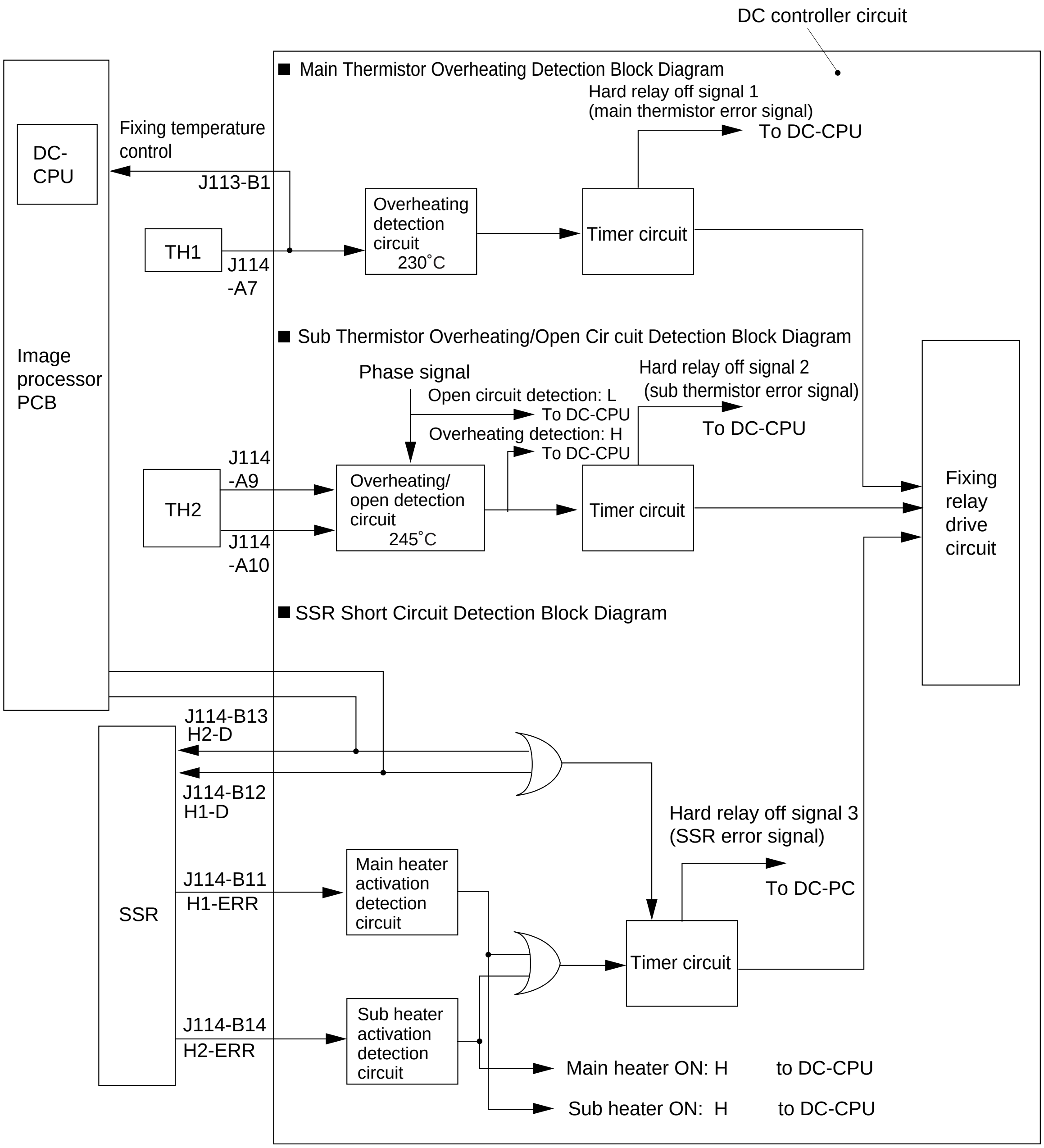
DC controller circuit
■ Main Thermistor Overheating Detection Block Diagram
Hard relay off signal 1
(main thermistor error signal)
To DC-CPU
DC-CPU
Fixing temperature control
J113-B1
TH1
J114 -A7
Overheating detection circuit 230°C
Timer circuit
■ Sub Thermistor Overheating/Open Cir cuit Detection Block Diagram
Image processor PCB
Phase signal
Open circuit detection: L
To DC-CPU
Overheating detection: H
To DC-CPU
Hard relay off signal 2
(sub thermistor error signal)
To DC-CPU
J114 -A9
TH2
J114 -A10
Overheating/ open detection circuit 245°C
Timer circuit
Fixing relay drive circuit
■ SSR Short Circuit Detection Block Diagram
J114-B13 H2-D
J114-B12 H1-D
SSR
Hard relay off signal 3
(SSR error signal)
To DC-PC
J114-B11 H1-ERR
Main heater activation detection circuit
Timer circuit
J114-B14 H2-ERR
Sub heater activation detection circuit
Main heater ON: H to DC-CPU
Sub heater ON: H to DC-CPU

Figure 9-104 Error Monitoring Block of the Fixing Heater

E. Upper Fixing Roll Bias

	Description
Purpose	To limit offset of toner to the upper fixing roller.
Sequence	Applies a bias only when paper moves through the fixing rollers.
Bias	Negative DC bias (-900 V)
Contact	Metal core of the upper fixing roller (Figure 9-105).

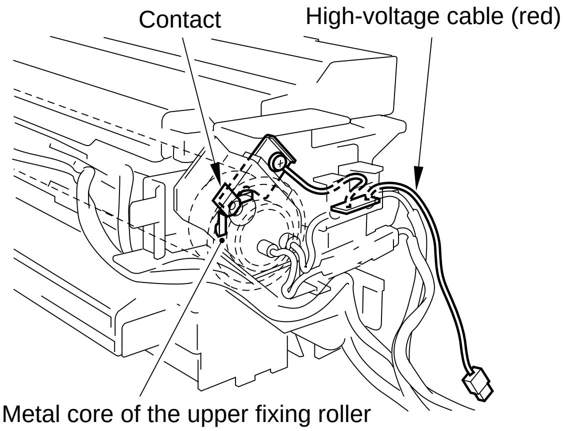
Contact
High-voltage cable (red)
Metal core of the upper fixing roller

Figure 9-105 Bias Contact of the Upper Fixing Roller

II. DISASSEMBLY/ASSEMBLY

Be sure to observe the following when disassembling/assembling the parts:

1. ⚠ The power plug must be disconnected before starting the work.
2. The steps used to disassemble the parts must be reversed when assembling them, unless otherwise noted.
3. The screws must be identified by type (length, diameter) and location.
4. The washer used with a specific mounting screw (e.g., for grounding wire and varistor) must not be left out to ensure electric conductivity.
5. The screws that are paint-locked in place must not be removed during disassembly work.
6. The machine must not be operated with any of its parts removed, unless otherwise required.

A. Fixing Assembly

1. Removing the Fixing Assembly

1) Open the front door.
2) Remove the screw [2], and detach the fixing assembly knob.

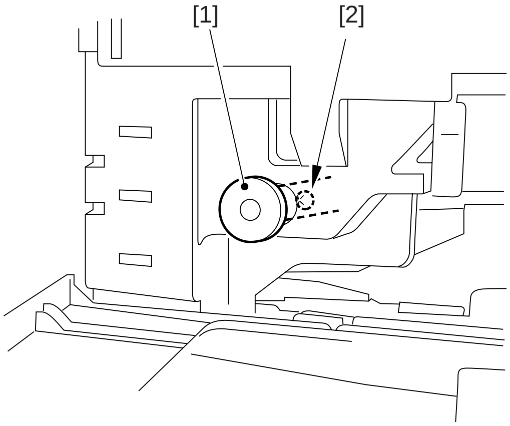

Figure 9-201

3) Remove the screw [3] (Figure 9-202).
4) Detach the fixing delivery connector cover [4] as if to displace it upward.

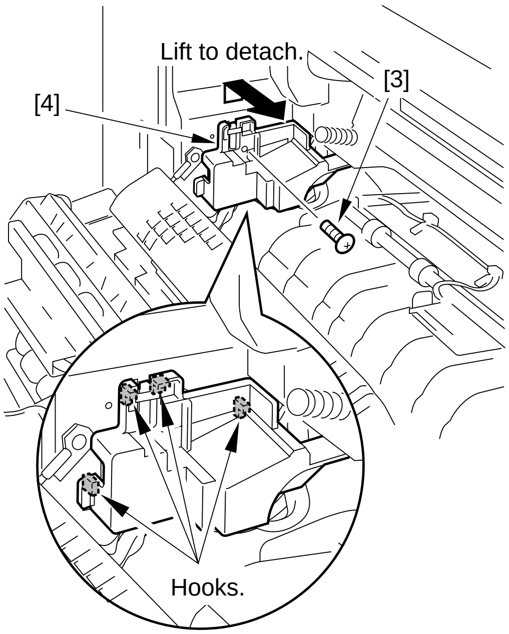

Figure 9-202

Caution:

- When mounting the connector cover, take care so that its bottom will not interfere with the spring shown in the figure.
- Take care so that the connector cover will not interfere with the spring, displacing the spring.

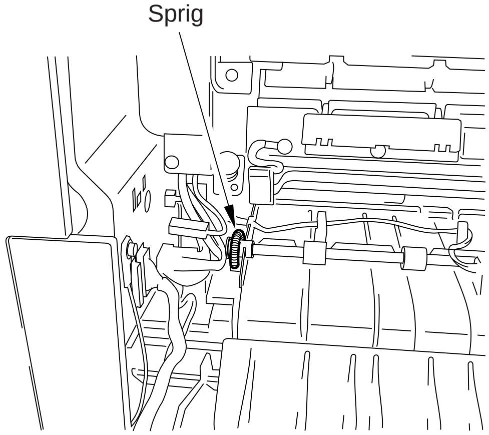

Figure 9-202-1

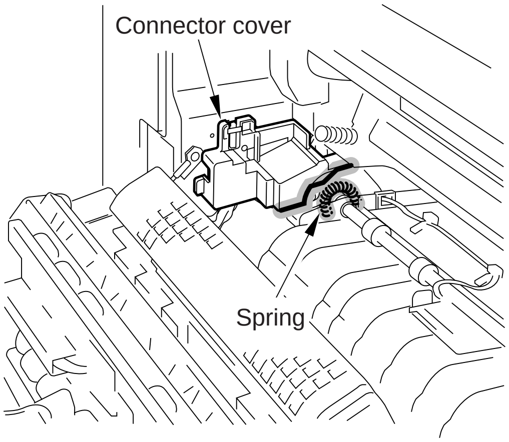

Figure 9-202-2

5) Remove the delivery assembly.
6) Disconnect the two connectors [5], and detach the high-voltage cable [6] (red cable).

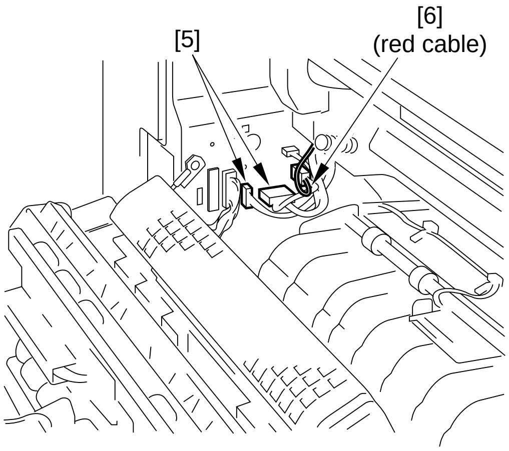

Figure 9-203

7) Remove the screw [7], and detach the fixing assembly outlet sensor connector cover [8].

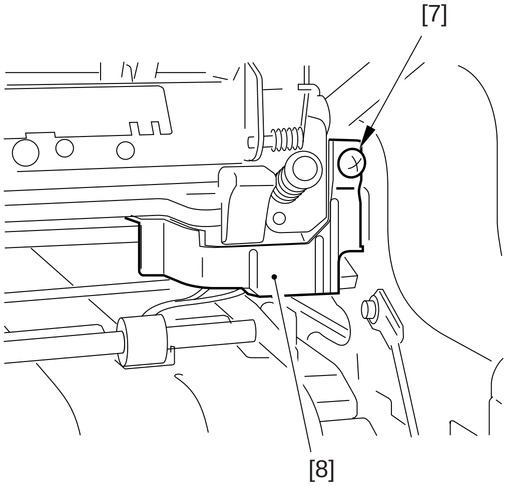

Figure 9-204

8) Disconnect the connector [9], and remove the two screws [10]; then, slide out the fixing assembly.

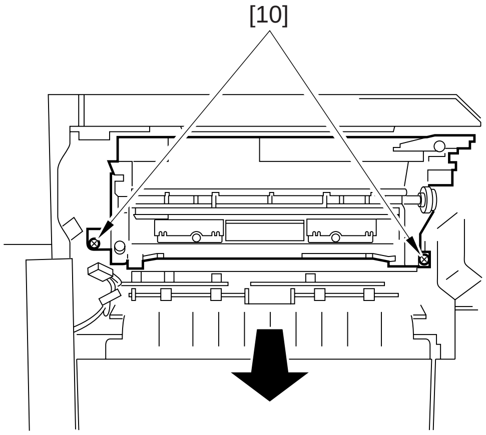

Figure 9-205

2. Removing the Fixing Heater

1) Remove the fixing assembly from the copier.
2) Remove the two screws [2], and detach the protective cover [1].

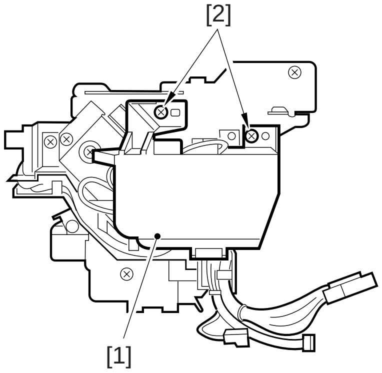

Figure 9-206

3) Remove the screw [3] (w/ spring) used to secure the heater terminal in place.
4) Remove the faston [4] of the heater terminal.

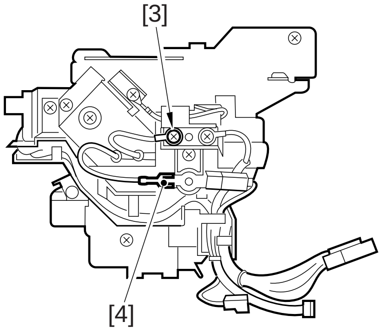

Figure 9-207

5) Shift the harness guide [5] to the right, and detach it while paying attention to the hooks.

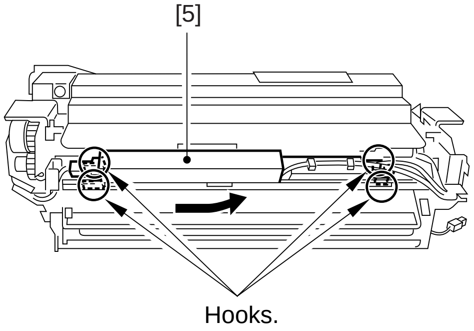

Figure 9-208

Caution:
When mounting the harness, take care not to trap the harness with the harness guide.

6) Remove the fasten [6] of the heater terminal.

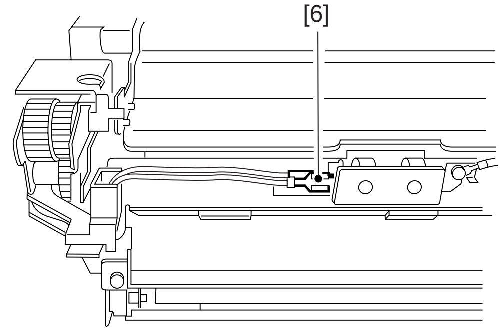

Figure 9-209

7) Remove the two screws [8], and detach the harness guide [7].

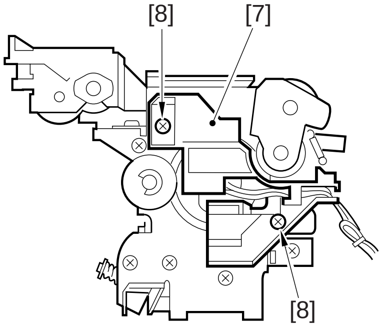

Figure 9-210

8) Remove the screw, and detach the metal plate [9]; then, pull out the heater.

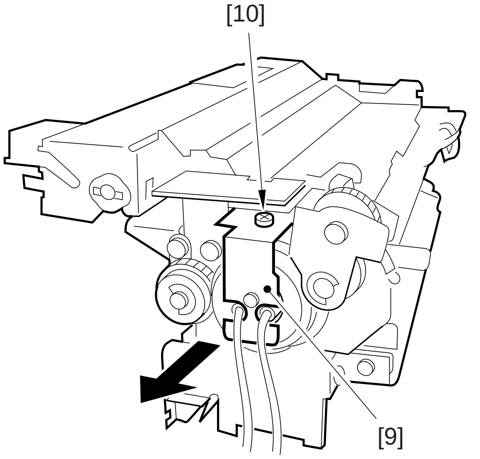

Figure 9-211

Caution:
When mounting the fixing heater, keep the following in mind:

a. The surface of the heater must not be touched.
b. The sub heater has one round terminal [12]. The main heater has fastons [13] on both ends. Distinguish the two by the lead wires [11].

- Main Heater

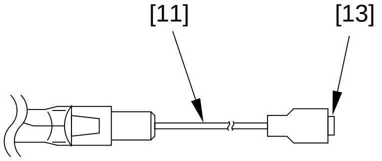

Figure 9-211-1

- Sub Heater

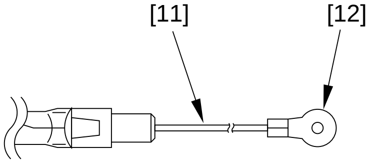

Figure 9-211-2

c. Pay attention to the lead wires on both ends of the main heater and the sub heater: the side with the shorter lead wire is to the front.
d. When viewing from the front of the fixing assembly, mount the main heater to the right (pick-up side) and the sub heater to the left (delivery side).

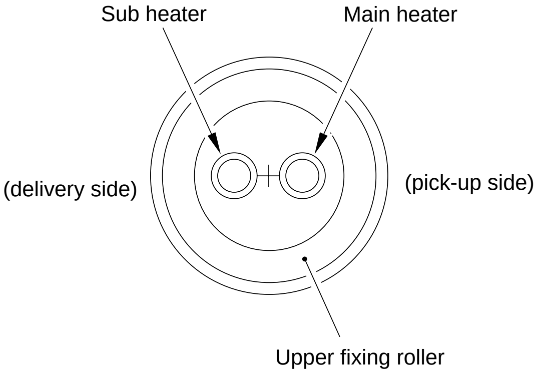

Figure 9-211-3

3. Removing the Fixing Roller

1) Remove the fixing assembly from the copier.
2) Remove the two screws [1], and detach the fixing cleaner assembly [2].

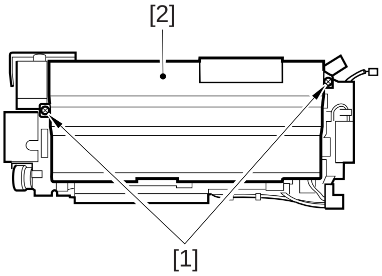

Figure 9-212

3) Remove the fixing heater.
4) Shift the paper guide [3] to the left to detach.

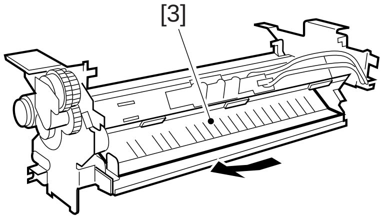

Figure 9-213

5) Remove the four screws [6], and detach the thermal switch assembly [4] and the thermistor assembly [5].

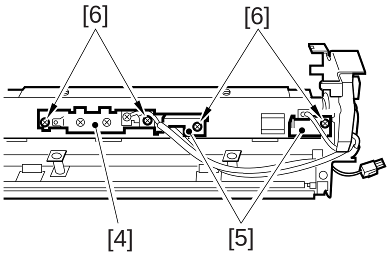

Figure 9-214

6) Remove the three screws [8] and another screw [9] (M3x6); then, detach the harness guide [7].

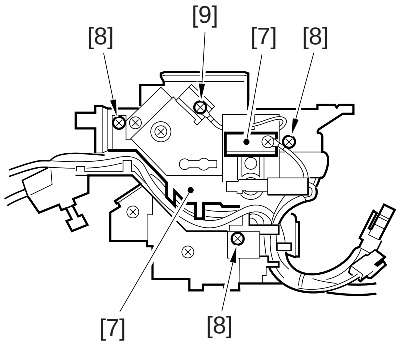

Figure 9-215

7) Remove the two screws [11], an detach the heater guide plate.

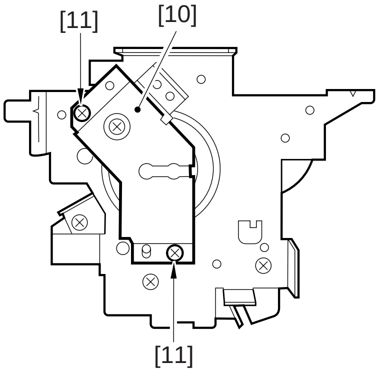

Figure 9-216

8) Remove one of the screws [12] from the lower stay; then, fit it in the hole [13] to release the lower roller.

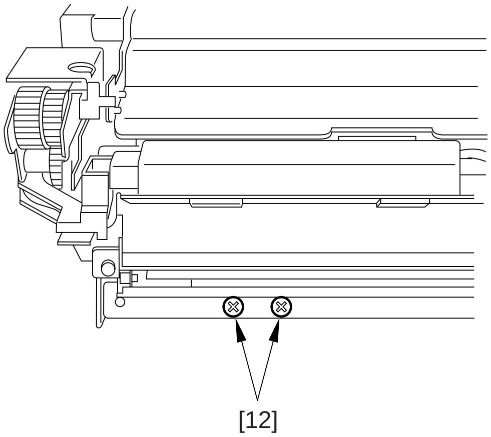

Figure 9-217-1

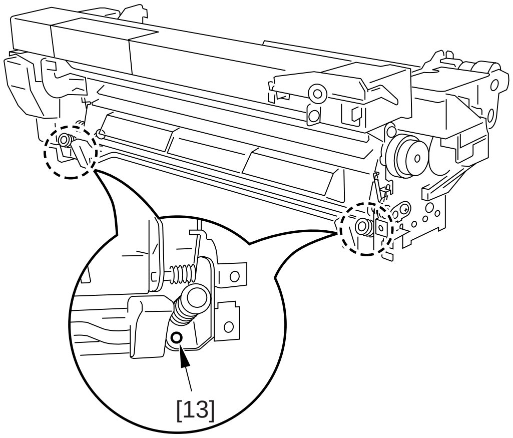

Figure 9-217-2

9) Open the separation claw assembly [14], and mount the protection cover [15] with a screw [16]; this way, the separation assembly will remain free.

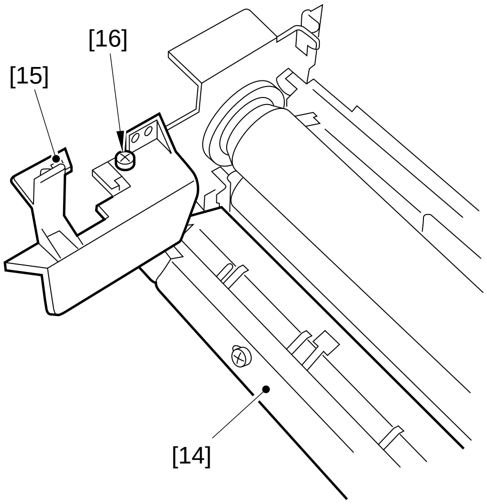

Figure 9-218

10) Remove the C-ring [17] used to secure the upper fixing roller in place; then, remove the gear [18] and the insulating bush [19].

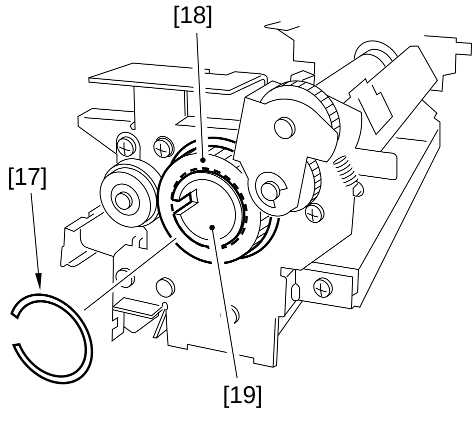

Figure 9-219

11) Remove the TP screw [20], and pull out the upper fixing roller.

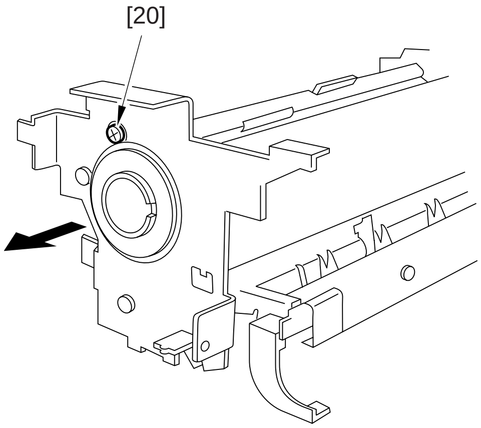

figure 9-220

12) Lift the lower fixing roller [21] together with the bearing.

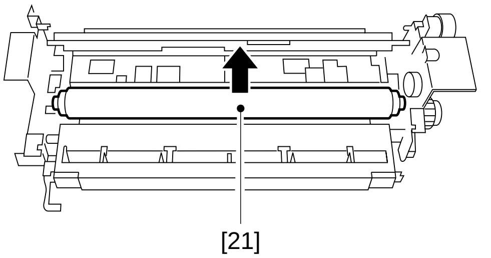

Figure 9-221

- Points to Note When Mounting the Upper Fixing Roller

1. Be sure to mount the following in the order indicated: C-ring [1], bias ring [2], bias insulating plate [3], bearing [4], and insulating bush [5].

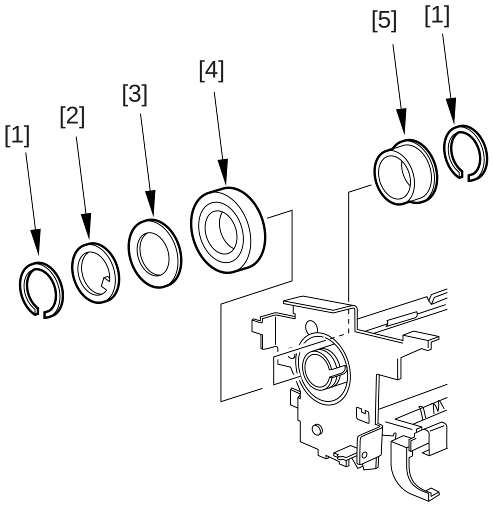

Figure 9-222-1

2. Be sure to keep the roller wrapped in paper (whenever possible) to protect its surface against dirt and scratches.

3. Be sure to mount the insulating bush by orienting it as shown in the figure.

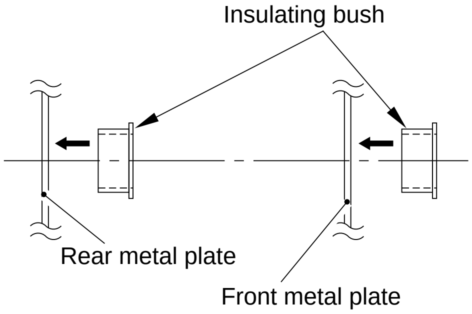

Figure 9-222-2

4. Be sure to orient the fixing roller so that the longer bushing is toward the rear.

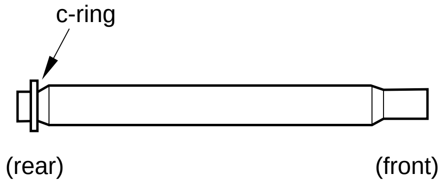

Figure 9-222-3

Caution:
Do not leave out the C-ring.

4. Removing the Lower Separation Claw

1) Open the front door.
2) Open the delivery assembly.
3) Take out the fixing assembly.
4) Remove the following from the fixing assembly, and detach the separation claw unit [5]:
   - Positioning pin [1] (1 pc.)
   - Screw [2] (1 pc.)
   - Spring [3] (2 pc.)
   - Grounding screw [4] (1 pc.)

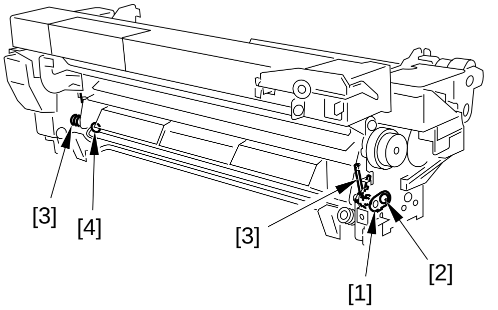

Figure 9-223

5) Remove the screw [6] (1 each), and detach the two lower separation claw units [7]; then, detach the two lower separation claws [9] while paying attention to the springs [8] (2 each).

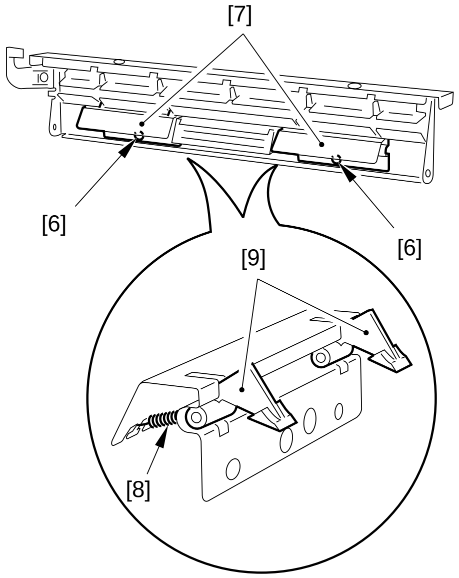

Figure 9-224

5. Removing the Upper Separation Claw

1) Open the front door.
2) Open the delivery assembly.
3) Remove the fixing assembly.
4) Remove the separation claw unit. (See 5 "Removing the Lower Separation Claw.")
5) Remove the two screws, and detach the upper separation unit [2]; then, detach the five upper separation claws [4] while paying attention to the spring [3] (1 each).

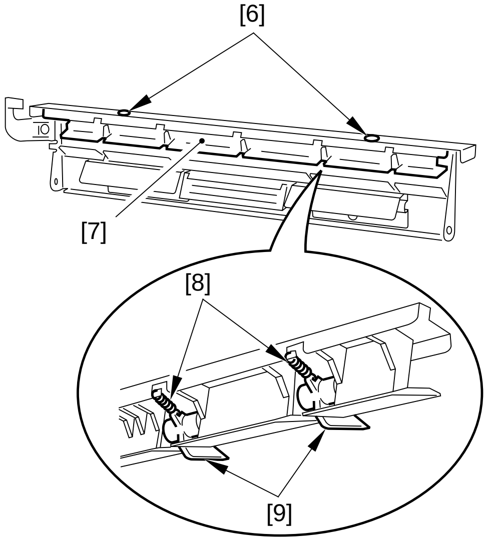

Figure 9-225

6. Position of the Fixing Assembly Inlet Guide

The fixing assembly inlet guide is adjusted in connection with the inlet guide mount. As such, its position need not be adjusted if the inlet guide is mounted.

Caution:
If you detached the inlet guide mount, you would have to adjust the position of the inlet guide. Do not loosen the screw on the inlet guide. If you must, be sure to mark the position with a scriber.

7. Removing the Fixing Assembly Outlet Sensor

1) Open the front door.
2) Open the delivery assembly.
3) Remove the fixing assembly.
4) Remove the four screws [3], and detach the fixing assembly inlet sensor connector cover [1] and the fixing assembly outlet sensor [2] from the bottom of the fixing assembly.

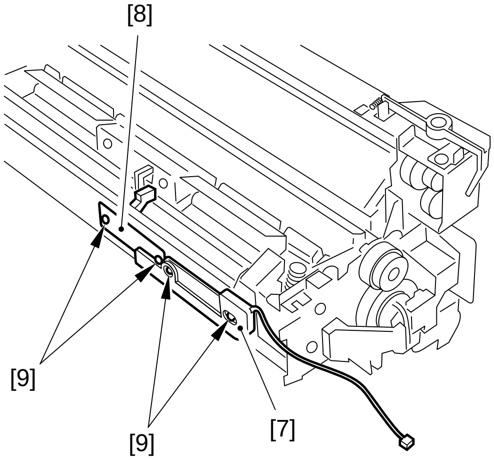

Figure 9-226

8. Applying Lubricant

Apply heat-resisting grease (CK-0427) to the parts shown.

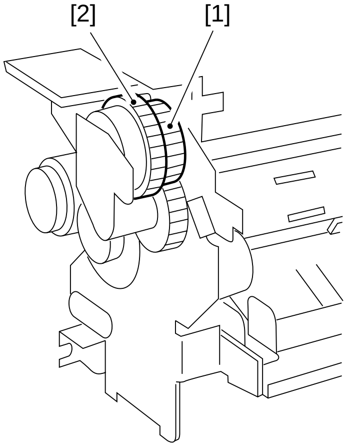

Figure 9-227

- Engagement of the gears (on flat teeth; heat-resisting grease)
- Edge of gears (lubricant)
- Engagement of gears of the fixing assembly knob (heat-resisting grease)

9. Mounting the Thermistor

Check to make sure that the detecting face of the thermistor [1] is in even contact with the surface of the upper fixing roller [2].

Be sure that the lead wire from the thermistor is not excessively taut.

Reference:

You need not adjust the position of the thermistor. If the contact is not even, check to make sure that the thermistor spring is not deformed.

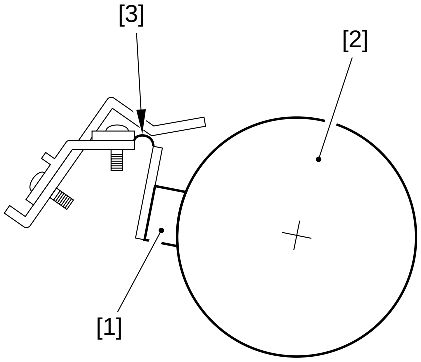

Figure 9-228

10. Mounting the Thermal Switch

Check to make sure that the thermal switch [1] is in even contact with the surface of the upper fixing roller [2].

Reference:

You need not adjust the position of the thermal switch. If the contact is not even, check to make sure that the thermal switch spring [3] is not deformed.

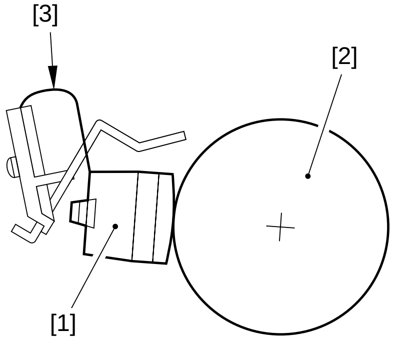

Figure 9-229

11. Adjusting the Lower Fixing Roller Pressure (nip)

If you have replaced the upper fixing roller or the lower fixing roller, or fixing faults occur, make adjustments as follows:

If you are taking measurements when the fixing roller is cold, wait 15 min after the end of the wait period, make 20 copies, and then take measurements.

Taking Measurements

1) Make a single A3 solid black copy, and feed the output into the multifeeder to make a solid black copy. Then, set the resulting output in the multifeeder. (The output carries two layers of toner.)
2) Select NIP-CHK in service mode (FUNCTION>FIXING); then, press the OK key.
3) Check to see that the copier automatically makes a soiled black copy and delivers it.
4) Measure the area of the copy where the toner is shiny.

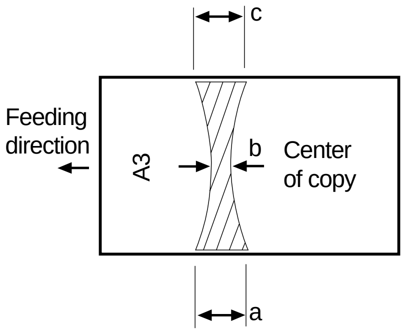

Figure 9-230

Caution:
a and c are points 10 mm from the ends of the copy paper.

Dimension	Measurements*
b	5.5 ± 0.3 [mm]
a-c	0.5 mm or less

* Taken when both upper and lower rollers are fully heated.

Table 9-201

5) If the measurements are not as indicated, turn the adjusting screw [1] at the rear and the front of the fixing assembly to make adjustments.

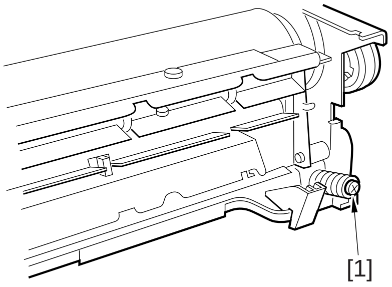

Figure 9-231

12. Fixing Lower Roller and the Bearing

When replacing the lower roller or the bearing, apply heat-resisting grease to prevent caking on the lower fixing roller and the bearing. (Clean the parts before application.)

B. Fixing Cleaner Assembly

1. Outline

The fixing cleaner assembly is located above the fixing assembly. It is designed to keep a cleaning belt impregnated with silicone oil against the surface of the upper roller to remove dirt.

The cleaning belt is 15 m in length, and a red band appears when it starts to run out (2.5 form the end).

Caution:
If you have replaced the fixing cleaning belt, reset the reading of WEB in service mode (COPIER>COUNTER>MISC-FIX-WEB).

2. Detaching the Fixing Cleaning Belt

1) Remove the fixing assembly from the copier.
2) Remove the two screws [1], and remove the fixing cleaner assembly [2].

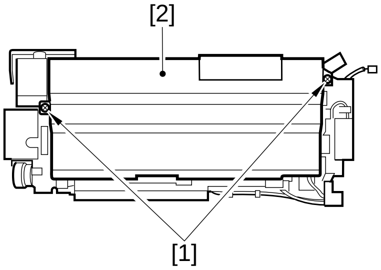

Figure 9-232

3) Turn over the fixing cleaner assembly.
4) Lift the take-up shaft [3] while moving it in the direction of the arrow.

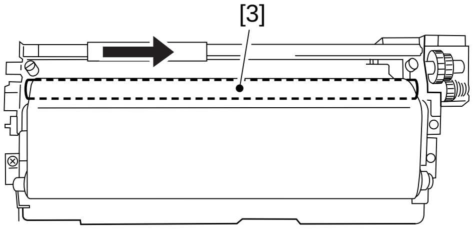

Figure 9-233

5) Remove the four screws [4], and take out the retaining roller assembly.

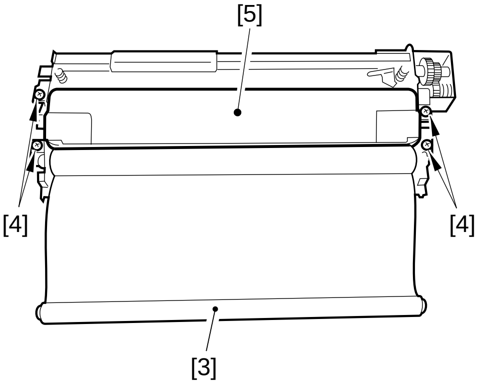

Figure 9-234

6) Disengage the hook of the cleaning belt set shaft [6], and turn it counterclockwise to remove.

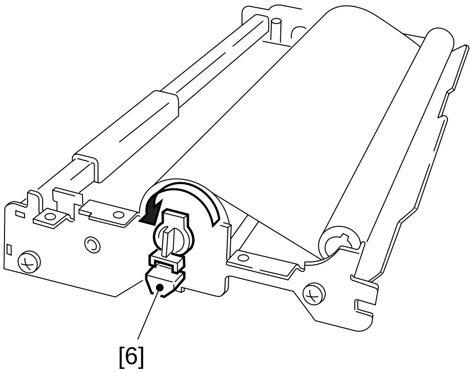

Figure 9-235

7) Remove the cleaning belt.

3. Attaching the Fixing Cleaning Belt

The fixing cleaning belt service part consists of a feed shaft, take-up shaft, and belt.

Attach the cleaning belt by reversing the steps used to detach it with the following in mind:

a. Wind the cleaning belt around the take-up shaft five to ten times.
   At this time, check that the area coming into contact with the roller is impregnated with oil.

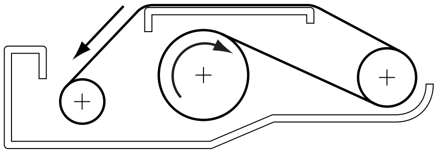

Figure 9-236-1

Caution:
Check the fixing belt to see that it is not slack or wrinkled and it is not wound askew.

b. After attaching the fixing belt, insert a small flat-blade screwdriver into the fixing belt drive shaft, and turn it counterclockwise until the slack is removed.

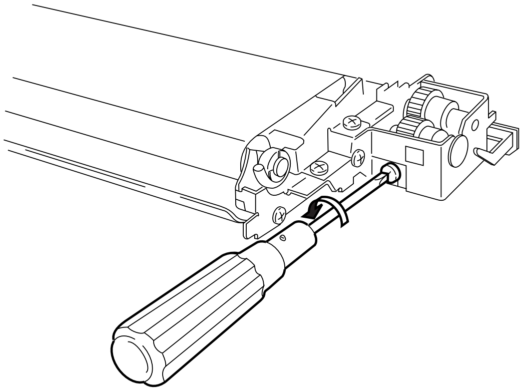

Figure 9-236-2

Caution:
Do not loosen the screw on the cleaning belt adjusting plate; otherwise, you would need to adjust the adjusting plate.

C. Fixing Assembly Inlet Solenoid Assembly

1) Remove the following:
    - Drum unit
    - Rear cover
    - Flywheel
    - Composite power supply unit
    - DC controller unit
2) Remove the harness, and remove the two screws [1]; then, detach the harness guide [2].

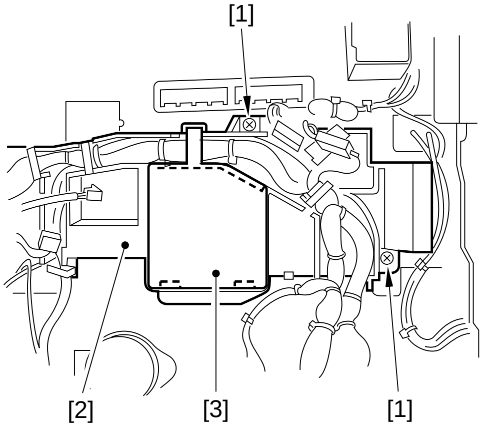

Figure 9-237

3) Remove the three screws [3], and remove the fixing assembly inlet solenoid assembly [4].

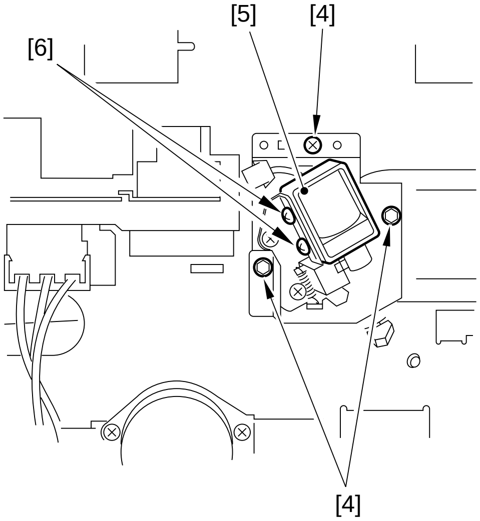

Figure 9-238

Caution:
The fixing assembly inlet guide solenoid assembly is adjusted at the factory. Do not remove the solenoid, i.e., do not loosen the screw [6].

D. Fixing Drive Assembly

1) Disconnect the power plug, and remove the following:
   - Front door
   - Drum unit
   - Inside cover
2) Remove the fixing assembly connector cover.
3) Remove the fixing assembly fixing screw.
4) Move the fixing assembly toward the delivery assembly side by 3 cm.
5) Remove the three screws [2], and disconnect the connector [3]; then, detach the fixing drive assembly [1].

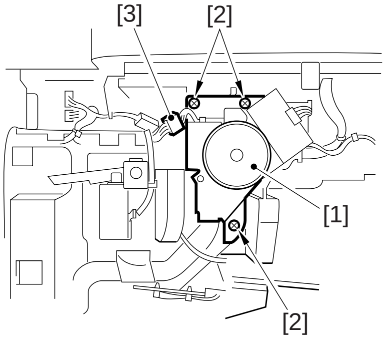

Figure 9-239

E. Fixing Cleaning Belt Solenoid

Make adjustments so that the gap of the solenoid [2] is 0.2 when the solenoid arm [1] is butted against A.

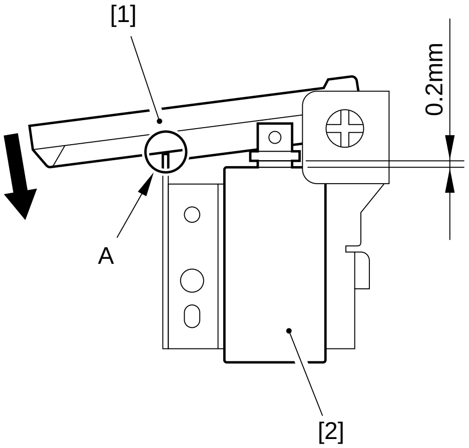

Figure 9-240

The act of butting here means letting the solenoid arm drop in the direction of the arrow on its own weight.

The tip of the solenoid arm is rubber. Do not force it with your finger during adjustment.

CHAPTER 10

EXTERNALS/AUXILIARY MECHANISMS

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I. CONTROL PANEL

A. Outline

The machine's control panel consists of the PCBs shown in Figure 10-101 and a liquid crystal display (LCD) capable of showing images in 320 x 240 dots. The control panel has the following functions:

[1] Data communication
[2] LCD processing
[3] LCD contrast adjustment
[4] Touch switch input processing

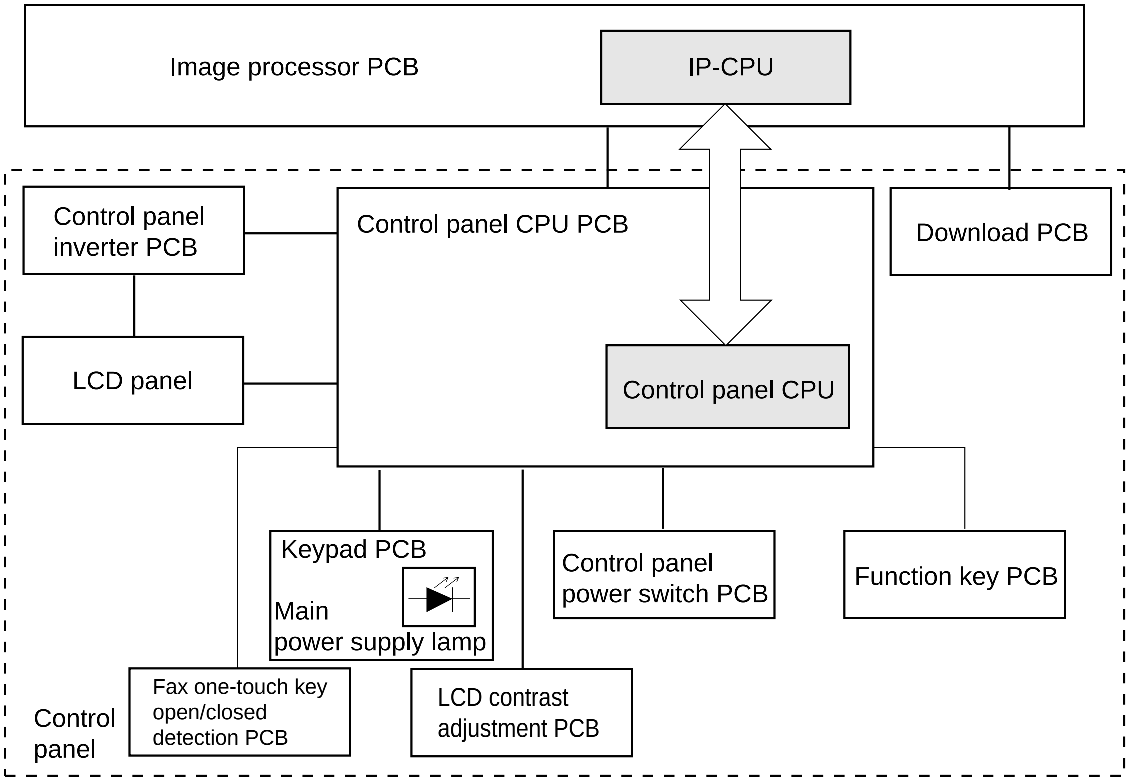


Image processor PCB
IP-CPU
Control panel inverter PCB
Control panel CPU PCB
Download PCB
LCD panel
Control panel CPU
Keypad PCB
Main power supply lamp
Control panel power switch PCB
Function key PCB
Fax one-touch key open/closed detection PCB
LCD contrast adjustment PCB
Control panel

Figure 10-101

B. Operation

1. Data Communication

The exchange of data is controlled by the IP-CPU (CPU for the image processor PCB).

2. LCD Processing

The IP-PCU sends data (display data) to the control panel CPU PCB as instructed by a program. The control PCU PCB, on its part, relays the data to the LCD panel.

3. LCD Contrast Adjustment

The machine is equipped with a dial (on the control panel) to enable the user to adjust the LCD contrast. The user may turn the dial to obtain LCD contrast of his/her choice.

4. Control Panel CPU

- Monitors key inputs for transmission to the IP-CPU. (keypad keys, function keys)
- Controls the buzzer sound.
- Turns on/off the control panel LCD.

5. Download PCB

For details, see VII. "Updating" in Chapter 13.

The following table shows the operations that are enabled when connecting the download PCB to a PCB with a by-Centronics interface.

		Downloading	Uploading
Flash memory for IP-CPU	4M, DIMM	❍	X
	1M, DIMM	❍	X
Flash memory for DC-CPU	1M, DIMM	❍	X
Back-up RAM		❍	❍

❍: Possible.
X : Not possible.

To switch between copying operation and downloading operation, use the bit switch on the download PCB.

Shift the bit switch to the right (LOAD) to select download mode. (The machine disables copying operations.)

Shift the bit switch to the left (COPY) to select normal copying mode.

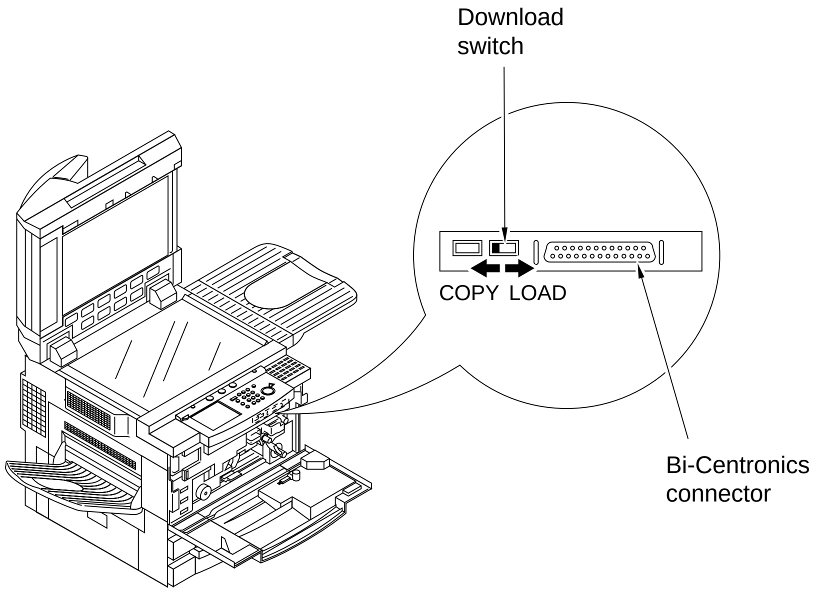


Figure 10-101-1

II. FANS

A. Arrangement and Functions

The following table shows the names and the functions of the fans used in the machine.

Notation	Name	Function	E code**
FM1	Feeder fan	Draws copy paper to the feeding belt. Helps feeding.	None
FM2*	Fixing assembly heat discharge fan 1***	Discharges heat from around the fixing assembly.	E805-0002
FM3*	Fixing assembly heat discharge fan 2 ***		E805-0003
FM4*	Laser driver cooling fan	Cools the laser driver PCB.	E805-0004
FM5*	Laser scanner motor cooling fan 1	Cools the laser scanner motor.	(E805-0005)
FM6*	Laser scanner motor cooling fan 2	• Cools the laser scanner motor. • Insulates the drum cartridge against heat from the fixing assembly.	E805-0006
FM7*	Cleaner heat discharge fan	• Discharges heat from the drum cleaning assembly and fixing assembly. • Discharges heat from the DC controller PCB.	E805-0007
FM8*	System cooling fan	Discharges heat from the composite power supply and the DC controller PCB.	E805-0008
FM9	Reversing guide cooling fan	Prevents curling of paper.	None
FM10	Low-voltage power cooling fan 1	Discharges heat from the low-voltage power supply.	E805-0010
FM11	Low-voltage power cooling fan 2		E805-0011
FM12	Reader cooling fan 1	Cools the reader (image processor PCB, laser driver PCB).	E805-0012
FM13*	Reader cooling fan 2		E805-0013
FM14	Drum cartridge cooling fan 1	Cools the drum cartridge.	(E805-0014)
FM15	Drum cartridge cooling fan 2		(E805-0015)
FM16	Drum cartridge cooling fan 3		(E805-0016)
FM17*	DC controller PCB cooling fan	Cools the DC controller PCB.	(E805-0017)
FM18*	Scanner motor cooling fan	Cools the scanner motor.	(E805-0018)

* Fans rotating at half speed during standby (in half-rotation state, 15 V).

** "xx" of "E805-xx" indicates a detail code. Check in service mode (DISPLAY>**ERR**). The E codes in parentheses are not indicated on the control panel, but are found as part of the error history in service mode.

*** FM2 and FM3 may be made to rotate at half speed or stop, using COPIER>OPTION>FAN-SPD. However, do not change the setting unless the environment of the site is 27.5°C or less.

Table 10-201

Figures 10-201, -202, and -203 show the arrangement of fans.

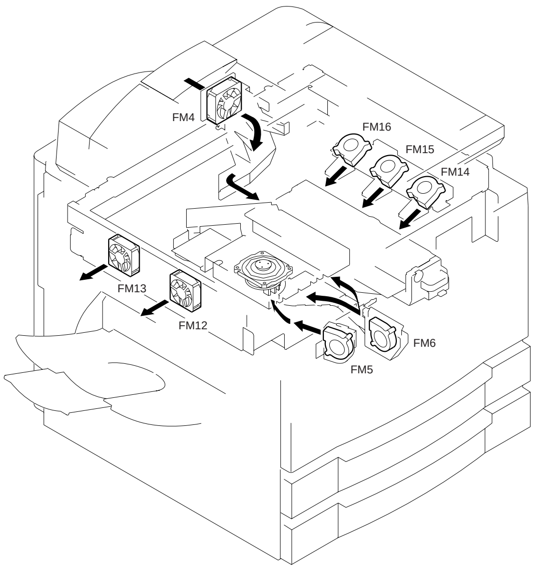

FM4
FM16
FM15
FM14
FM13
FM12
FM6
FM5

Figure 10-201 Direction of Air Current (1/3)

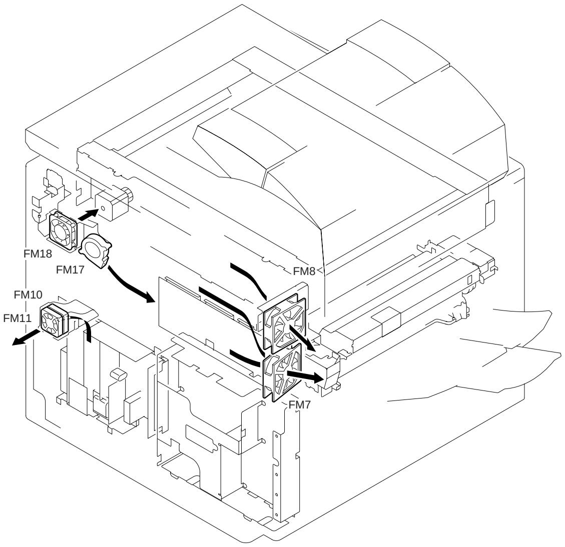

FM18
FM17
FM8
FM10
FM11
FM7

Figure 10-202 Direction of Air Current (2/3)

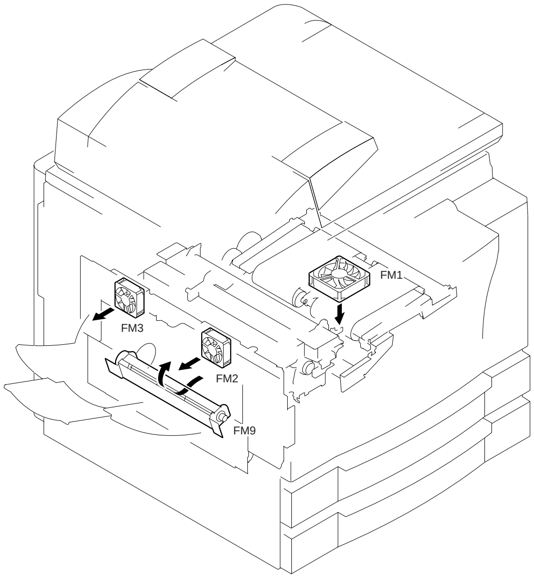

FM1
FM3
FM2
FM9

Figure 10-203 Direction of Air Current (3/3)

B. Sequence of Operations

1. 2-Speed Control

Of the fans used in the machine, some are designed to rotate at half speed during standby (Tables 10-201, -202 through -204). The speed is switched between full and half by changing the voltage supplied by the DC-CPU* to the fans.

* CPU for the DC controller circuit (mounted on the image processor PCB).

Speed	Timing	Supply voltage	Supply source	PORT A	PORT B
Full	Copying	+24V	Composite power supply PCB	1	0
Half	Stanby	+15V	Low-voltage power supply PCB	0	1

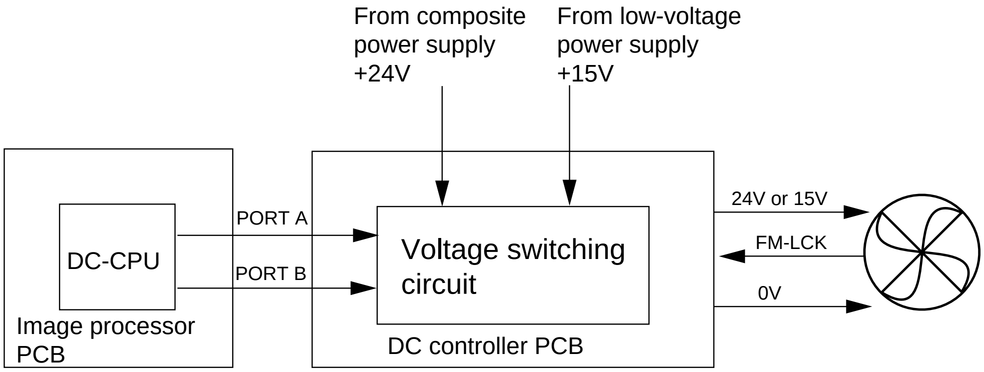
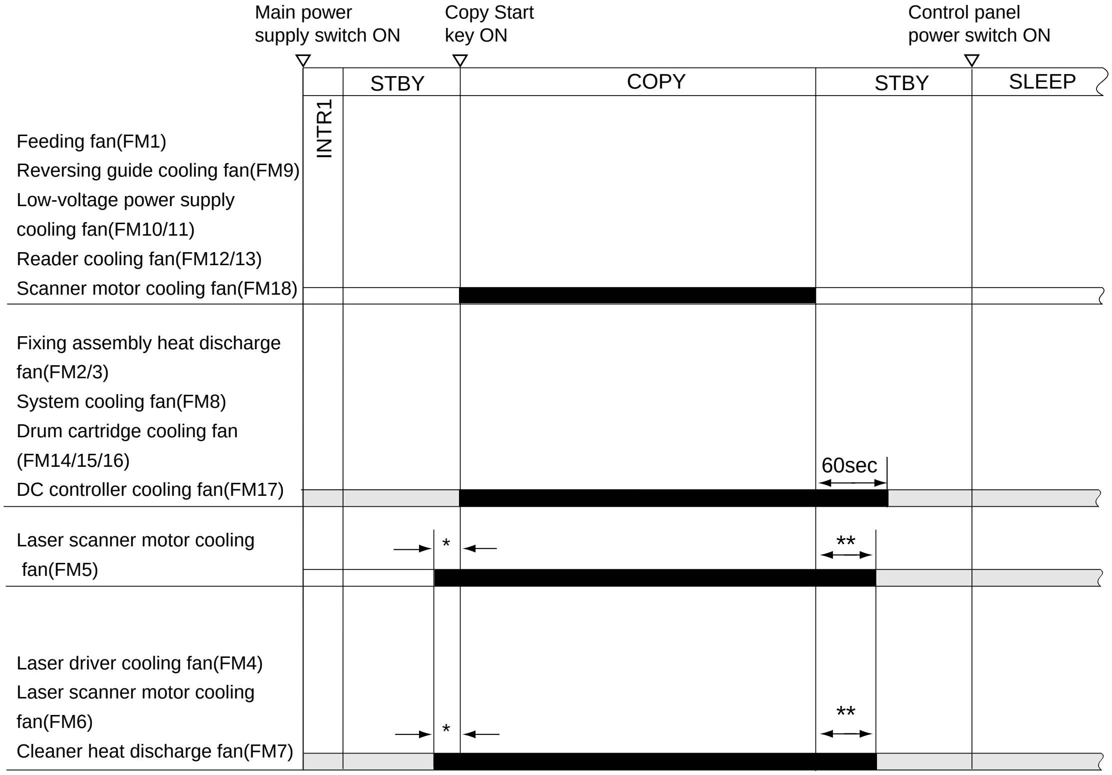

From composite power supply +24V
From low-voltage power supply +15V
DC-CPU
Image processor PCB
PORT A
PORT B
Voltage switching circuit
DC controller PCB
24V or 15V
FM-LCK
0V

Figure 10-204

2. Sequence of Operations

■ Direct Copying and Fax Output Operation


Main power supply switch ON
Copy Start key ON
Control panel power switch ON
INTR1
STBY
COPY
STBY
SLEEP
Feeding fan(FM1)
Reversing guide cooling fan(FM9)
Low-voltage power supply cooling fan(FM10/11)
Reader cooling fan(FM12/13)
Scanner motor cooling fan(FM18)
Fixing assembly heat discharge fan(FM2/3)
System cooling fan(FM8)
Drum cartridge cooling fan (FM14/15/16)
DC controller cooling fan(FM17)
60sec
Laser scanner motor cooling fan(FM5)
*
**
Laser driver cooling fan(FM4)
Laser scanner motor cooling fan(FM6)
Cleaner heat discharge fan(FM7)
*
**

*If "time for shift to noise reduction mode" in user mode is set to '1' through '9' and the following takes place:
- A key is pressed.
- An original is placed in the feeder.
- The copyboard cover or the feeder is opened.

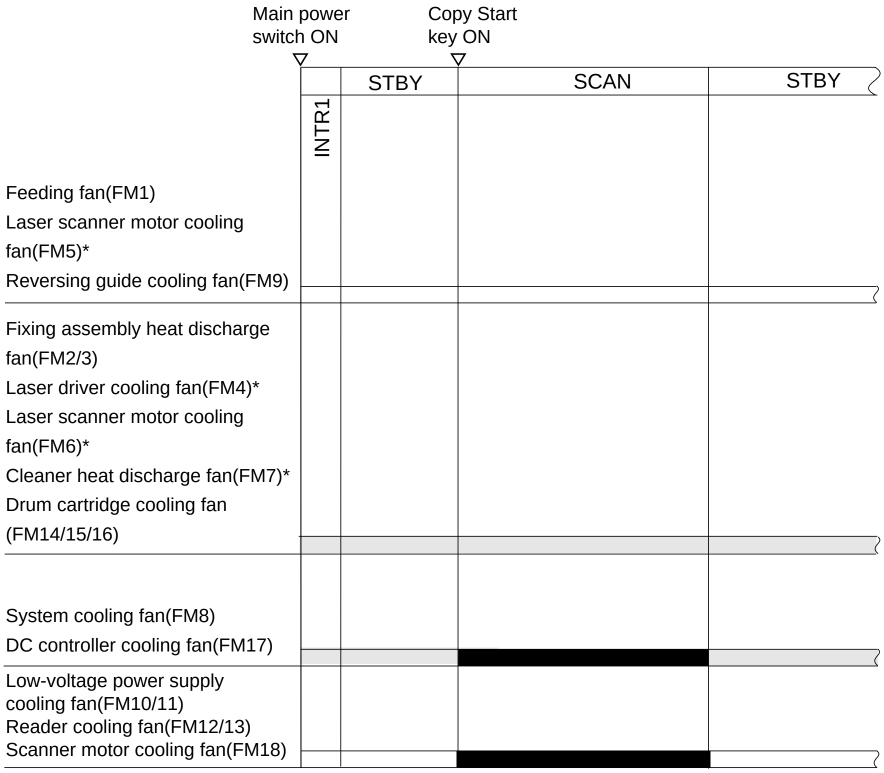
**The length of time varies according to the setting of "time for shift to noise reduction mode": if '0', about 8 sec; if '1' through '9', from 1 to 9 min.

■ : Full-speed rotation.

▨ : Half-speed rotation.

Figure 10-205

■ Reading by he Scanner (tdransmission)



* FM4, FM5, FM6, and FM7 start to rotate at full speed in response to the following; however, they will maintain the condition shown in the chart even during SCAN depending on the setting under "time for shift to noise reduction mode":
- A key is pressed.
- An original is placed in the feeder.
- The copyboard cover or the feeder is opened. if '1' through '9',

■ : Full-speed rotation.

▨ : Half-speed rotation.

Figure 10-205-1

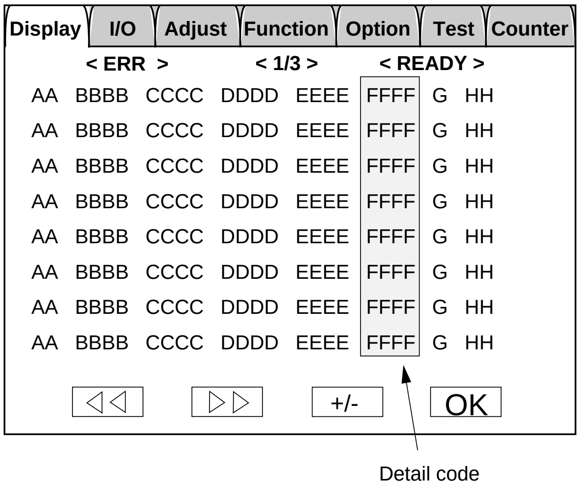
C. Detecting Errors (E805)

Each fan of the machine is equipped with an error detection mechanism.

If any fan suffers a deviation in rotation or fails to rotate at a specific speed, the machine will indicate an error code unique to that fan on the control panel.

The machine uses detail codes to isolate as many as 16 fans; if 'E805' is indicated, be sure to check the detail code in service mode.

3rd block from the right (COPIER>DISPLAY>**ERR**).


Display
I/O
Adjust
Function
Option
Test
Counter
◁◁
▷▷
+/-
OK
Detail code

```
< ERR >          < 1/3 >       < READY >
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
```

Figure 10-206

In addition, each fan has its own direction (current of air); be sure to orient them correctly whenever they must be disassembled/assembled or replaced.

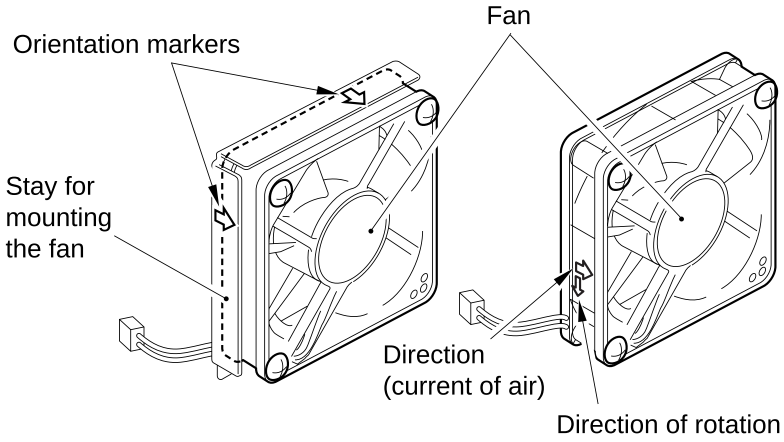

Orientation markers
Fan
Stay for
mounting
the fan
Direction
(current of air)
Direction of rotation

Figure 10-207

III. POWER SUPPLY

A. Outline of the Power Supply System

Figure 10-301 is a diagram, showing the distribution of power inside the machine.

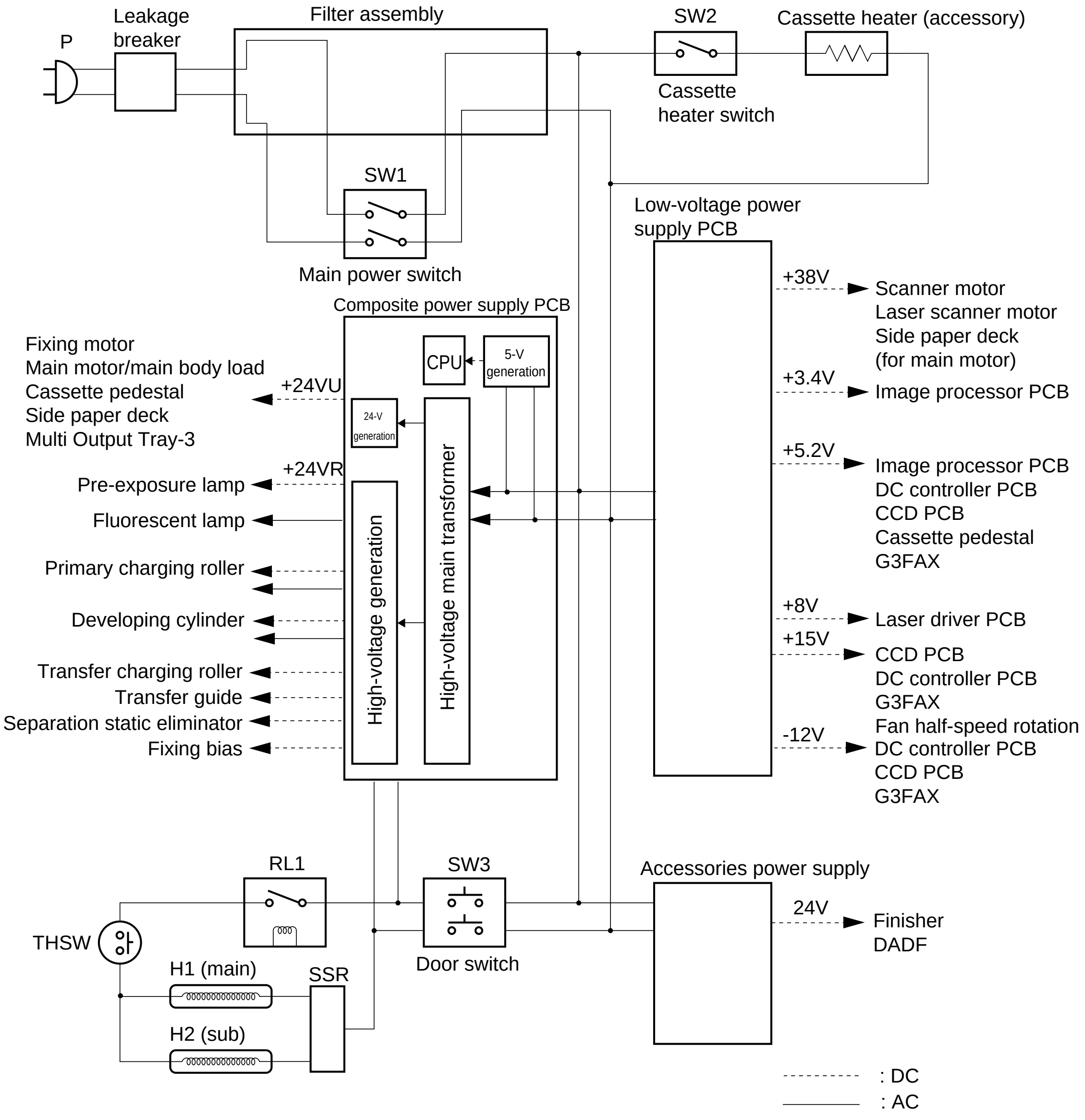

P
Leakage breaker
Filter assembly
SW2
Cassette heater (accessory)
Cassette heater switch
SW1
Main power switch
Low-voltage power supply PCB
Composite power supply PCB
CPU
5-V generation
24-V generation
High-voltage generation
High-voltage main transformer
Fixing motor
Main motor/main body load
Cassette pedestal
Side paper deck
Multi Output Tray-3
+24VU
+24VR
Pre-exposure lamp
Fluorescent lamp
Primary charging roller
Developing cylinder
Transfer charging roller
Transfer guide
Separation static eliminator
Fixing bias
+38V
Scanner motor
Laser scanner motor
Side paper deck
(for main motor)
+3.4V
Image processor PCB
+5.2V
Image processor PCB
DC controller PCB
CCD PCB
Cassette pedestal
G3FAX
+8V
Laser driver PCB
+15V
CCD PCB
DC controller PCB
G3FAX
Fan half-speed rotation
-12V
DC controller PCB
CCD PCB
G3FAX
RL1
SW3
Door switch
Accessories power supply
24V
Finisher
DADF
THSW
H1 (main)
H2 (sub)
SSR
: DC
: AC

Figure 10-301

B. Power Supply PCB

The machine's DC power is generated on the composite power supply PCB and the low-voltage power supply PCB.

Power supply generation PCB	Output		
	Rated output voltage	Tolerance	Destination
Low-voltage power supply PCB	+38V	38V +13% -12%**	Scanner motor, laser scanner motor, side paper deck (in STBY)
	+15V	15V ± 5%	CCD PCB, DC controller PCB, fax PCB, fan (during half-speed rotation)
	+7.6V circuit name +8.0V	6.2 to 9.2V	Laser driver PCB
	+5.2V circuit name +5.1V	5.2V ± 0.1V	Image processor PCB, DC controller PCB, CCD PCB, cassette pedestal, side paper deck, fax PCB
	+3.4V	3.4V ± 0.1V	Image processor PCB
	-12V	-12V ± 5%	DC controller PCB, CCD PCB, fax PCB
Composite power supply PCB	+24VU	-24V ± 10%	Fixing motor, main motor, machine DC load*, cassette pedestal, side paper deck (in operation), Multi Output Tray-3
	+24VR	-24V ± 5%	Pre-exposure lamp
	High voltage		Fluorescent lamp, primary charging roller, developing cylinder, transfer charging roller, transfer guide, separation static eliminator, fixing bias

* Motor clutch, solenoid, fan, etc.
** At rated load, 38 V ±10%.

Table 10-301

C. Transition to and from Sleep Mode

1. Outline

The machine goes through the following changes in its state according to the condition of power supply:

State	IP-CPU*	LCD	Fixing heater	Image memory for fax***	Possible operation
Main power off	OFF	OFF	OFF	Retention by battery	None
Sleep 3		ON			
Sleep 2	ON		Pre-heat	Retention by battery	Fax data transmission/ reception
Sleep 1					Fax data transmission/ reception, fax printing
Standby			ON**		All

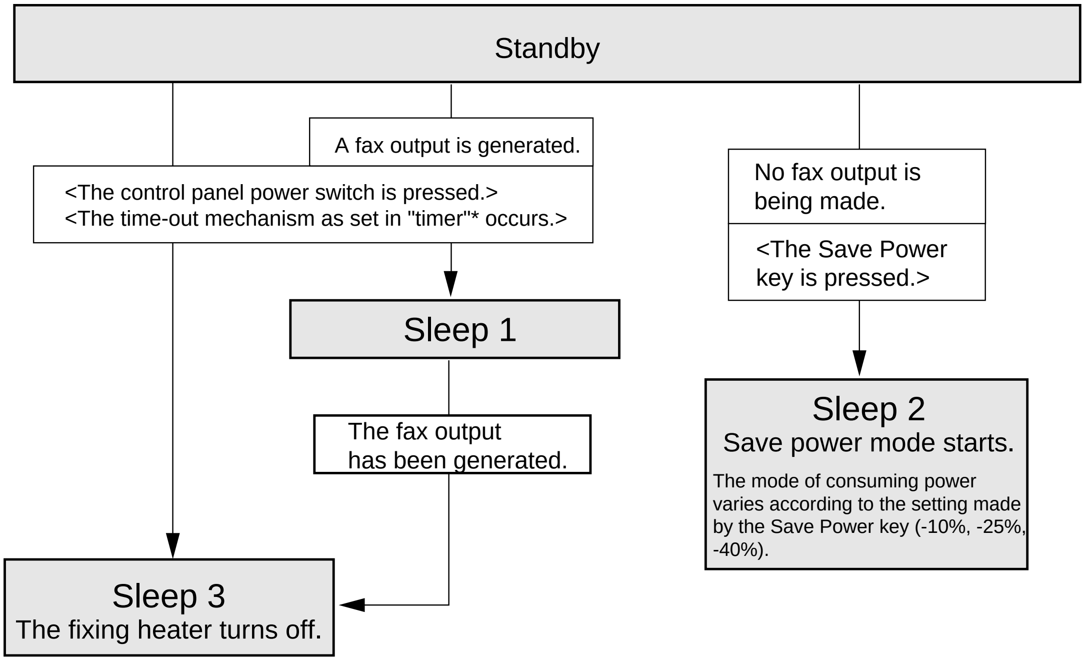
* CPU for the image processor PCB.

** Includes the period in which pre-heat is ended and the fixing heater is heated to a specific temperature.

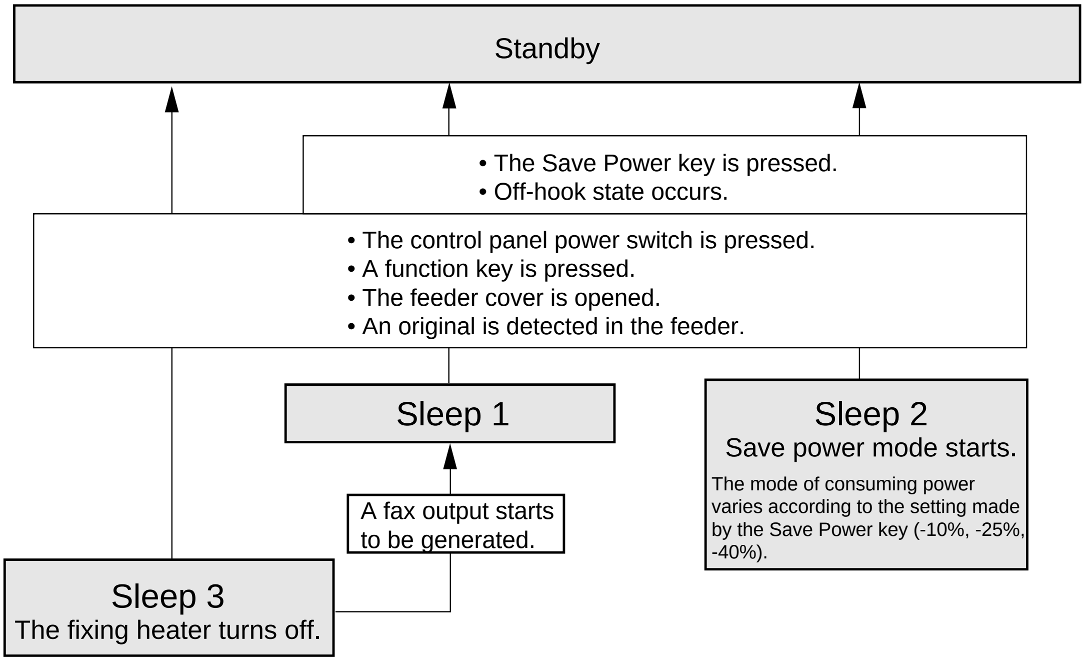
Table 10-302

2. Transition to Sleep Mode

a. Transition to Sleep Mode


Standby
A fax output is generated.
<The control panel power switch is pressed.>
<The time-out mechanism as set in "timer"* occurs.>
No fax output is being made.
<The Save Power key is pressed.>
Sleep 1
The fax output has been generated.
Sleep 2
Save power mode starts.
The mode of consuming power varies according to the setting made by the Save Power key (-10%, -25%, -40%).
Sleep 3
The fixing heater turns off.

b. Transition from Sleep Mode


Standby
• The Save Power key is pressed.
• Off-hook state occurs.
• The control panel power switch is pressed.
• A function key is pressed.
• The feeder cover is opened.
• An original is detected in the feeder.
Sleep 1
A fax output starts to be generated.
Sleep 2
Save power mode starts.
The mode of consuming power varies according to the setting made by the Save Power key (-10%, -25%, -40%).
Sleep 3
The fixing heater turns off.

* timer: auto power-off time, weekly timer.

Figure 10-302

IV. COUNTERS

A. Outline

Table 10-401 shows the machine's counter sensors and the counter sensors when the Finisher-C1/C2 is installed. Figure 10-401 shows the arrangement of the sensors; for the counter operations according to country, see IV-B.

Name	Operating conditions
External delivery sensor (PS7)	When paper is delivered. (single-sided; 2nd side image of double-sided)
Re-pick up sensor (PS9)	When paper is picked up (1st side of double-sided)
Delivery sensor(PI3)	When a finisher is installed.
No. 1 paper sensor (PI1A)	When the saddle stitcher function is used.
Others	When paper is picked up (when pick-up roller solenoid turns on; 1st side while a control card is used)

Table 10-401 Counter Sensors

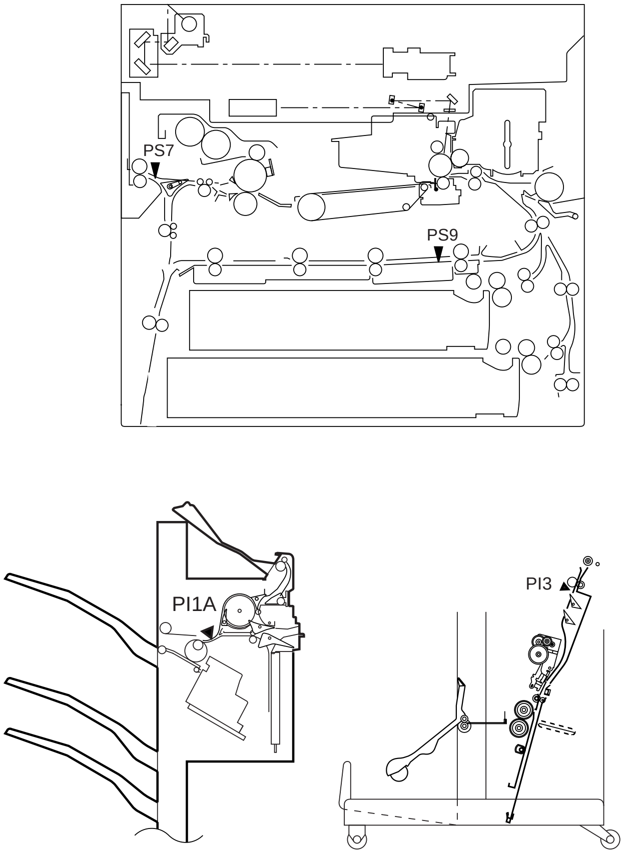


Figure 10-401 Arrangement of Counter Sensors

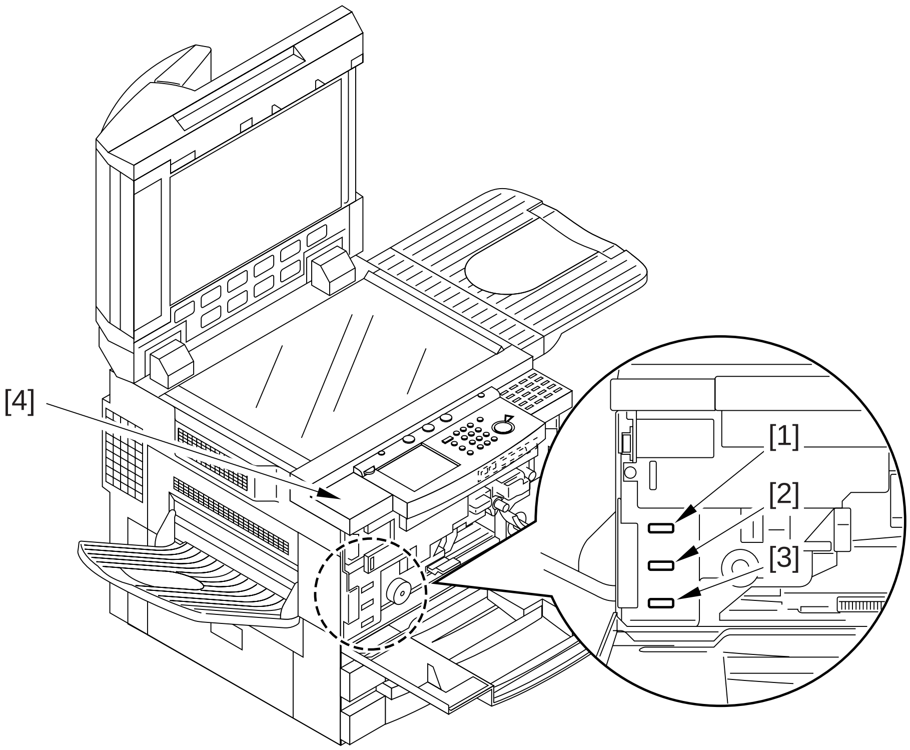


Figure 1-402 Arrangement of Counters

B. Operations of Counters

- 100-V Areas

Ref.	Counter	Total copy counter
[1]	Total	Counts all (copier output, printer output, fax output).
[2]	None	—
[3]	None	—
[4]	Control card (accessory)	Counts copier output and mail box printout*.

- 120-V Areas (excluding F13-6642, F13-66498)

Ref.	Counter	Total copy counter
[1]	Total	Counts totals (copier output, printer output, fax output).
[2]	Fax	Counts fax output.
[3]	Printer	Counts printer output.
[4]	Control card (accessory)	Counts copier output and mail box printout*.

- 230-V Areas (F13-6642, F13-6649)

Ref.	Counter	Total copy counter
[1]	Copy	Counts copier output.
[2]	Fax	Counts fax output.
[3]	Printer	Counts printer output.
[4]	Control card (accessory)	Counts copier output and mail box printout*.

*If OPTION>USER>MB-CCV is set to '1'.

V. DISASSEMBLY/ASSEMBLY

Be sure to observe the following when disassembling/assembling the machine:

1. ⚠ Disconnect the power plug for safety before starting the work.
2. Reverse the steps used to disassemble the parts when assembling them unless othewise noted.
3. Identify the screw by type (length, diameter) and location.
4. Do not remove any screws that are paint-locked when disassembling parts.
5. As a rule, do not operate the machine with any of its parts removed.

A. External Covers

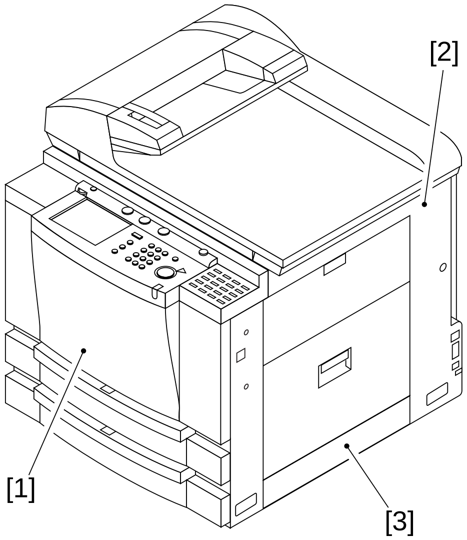


Figure 10-501

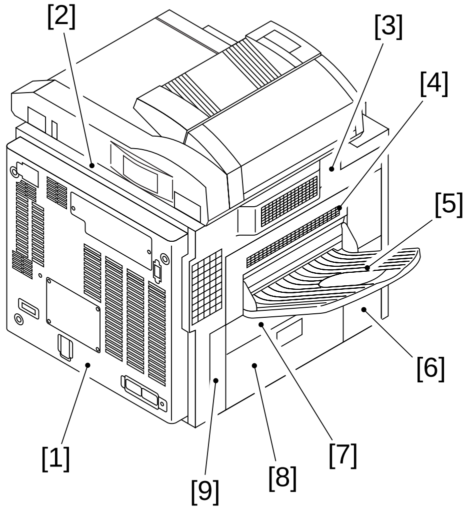


Figure 10-502

[1] Rear cover
[2] Upper rear cover
[3] Left cover
[4] Delivery door
[5] Delivery tray
[6] Front left cover
[7] Delivery assembly lower cover
[9] Rear left cover
[8] Left door

> **Note:**
> Remove the covers as necessary to clean, inspect, or repair the inside of the machine.
> Covers that can be detached by merely removing mounting screws are left out of the discussions.

1. Removing the Right Cover

If the lower right cover is not found, skip steps 4) and 5).

1) Remove the four screws, and detach the rear cover.
2) Open the front door.
3) Slide out the cassette.
4) Remove the screw from the lower right cover.

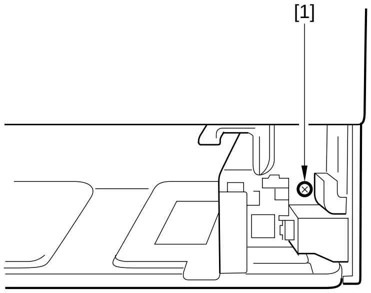


Figure 10-503

5) While pulling on the middle of the lower right cover [2], disengage the hook; then, detach the lower right cover.

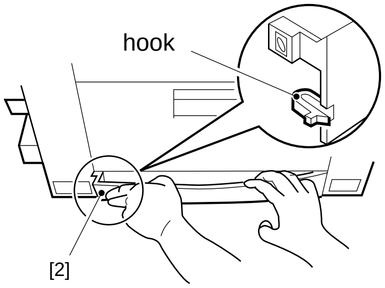


Figure 10-504

6) Open the multifeeder tray.
7) Detach the power cord cover [3].
8) Remove the four screws [4], and detach the right cover [5].

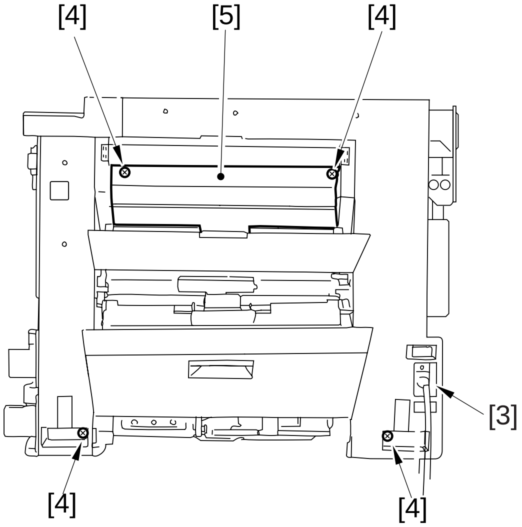


Figure 10-505

2. Removing the Left Cover

1) Remove the rear cover.
2) Open the front door.
3) Insert a screwdriver into the slot [2] identified by a marking on the rear left cover [1], and disengage the hook; then, detach the rear left cover.

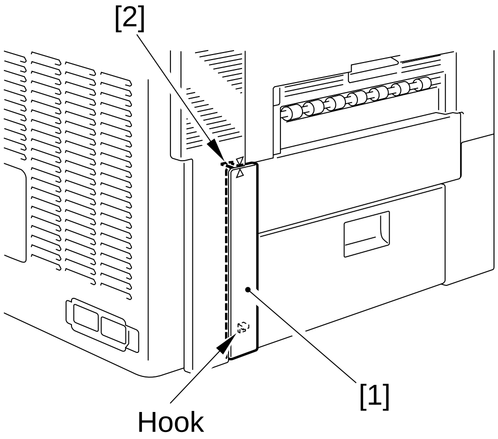


Figure 10-506

4) Remove the inside cover. (See B. "Removing the Front Cover/Inside Cover.")
5) Remove the two screws, and detach the vertical size plate.
6) Open the delivery assembly.
7) Remove the three screws.
8) Disengage the three hooks [4], and detach the left cover.

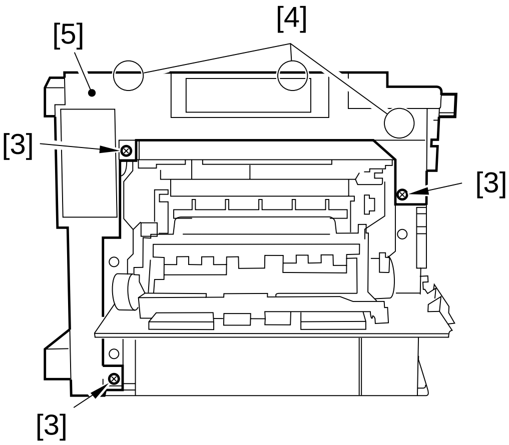


Figure 10-507

B. Removing the Front Door/Inside Cover

1) Open the front door, and shift up the two pins [1] of the hinge to remove; then, detach the front door.

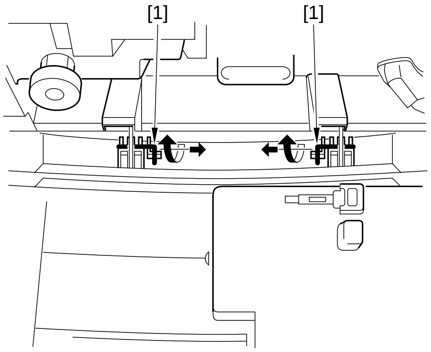


Figure 10-508

2) Remove the screw [3], and detach the fixing assembly knob.

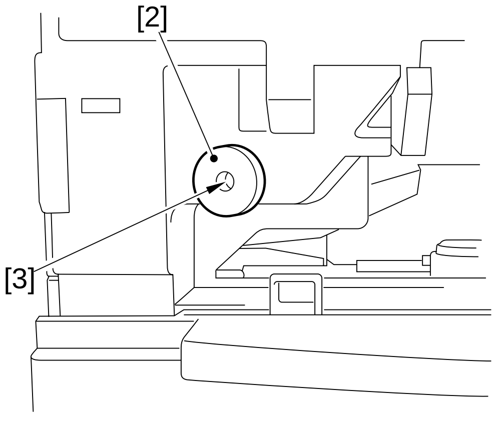


Figure 10-509

3) Unlock the developing assembly by turning the locking lever [4], and remove the knob [5] of the drum unit; then, pull out the drum unit carefully.
4) Turn the locking lever [4] to lock the developing assembly in place.

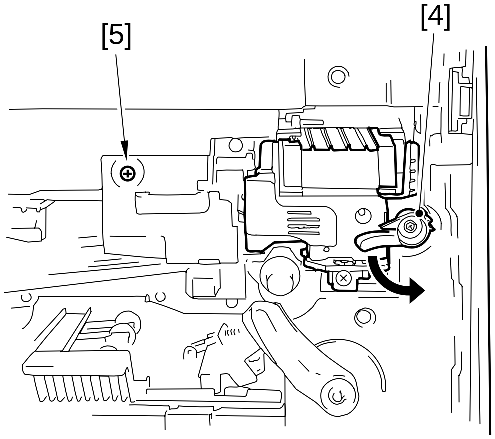


Figure 10 -510

5) Unlock the feeding assembly, and remove the feeding assembly lever [6] (w/ 1 stop ring [7]), and the registration roller knob [8].

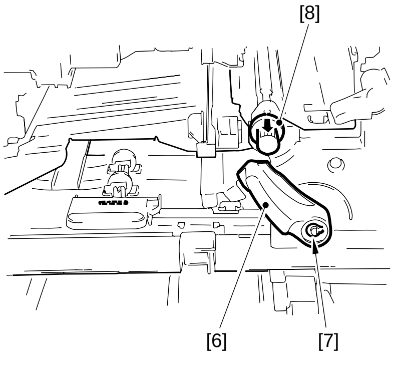


Figure 10-511

6) Open the delivery assembly.
7) Slide out the upper cassette.
8) Remove the five screws, and detach the inside cover.

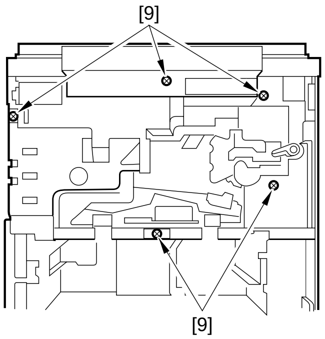


Figure 10-512

C. Control Panel

1. Removing the Control Panel

1) Remove the inside cover.
2) Remove the screw, and detach the magnet plate [1] from the top of the control panel.

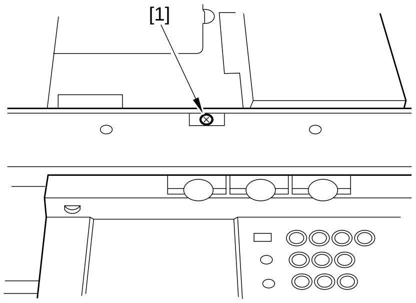


Figure 10-513

3) Free the shorting connector harness [2] shown in the figure from the edge saddle [3].

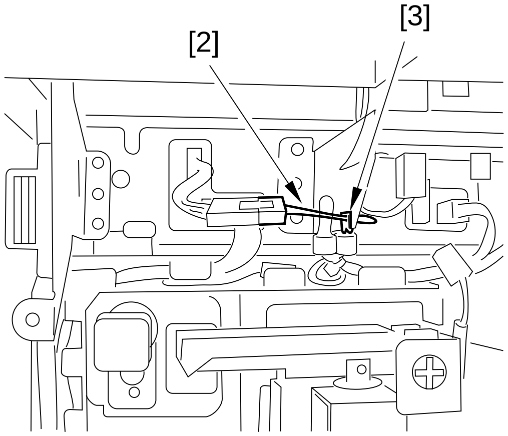


Figure 10-514

4) Disconnect the two connectors [4] from the back of the control panel.

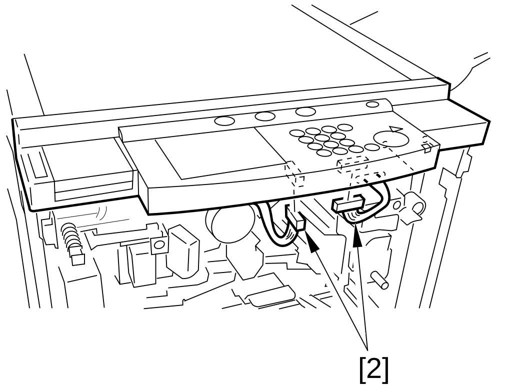


Figure 10-515

5) Remove the four screws [6], and detach the control panel [5].

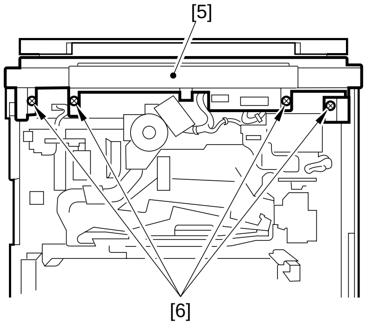


Figure 10-516

2. Removing the LD PCB, CPU PCB, and Key Switch PCB

1) Disconnect the three connectors, and remove the five screws; then, detach the control panel support plate [1].

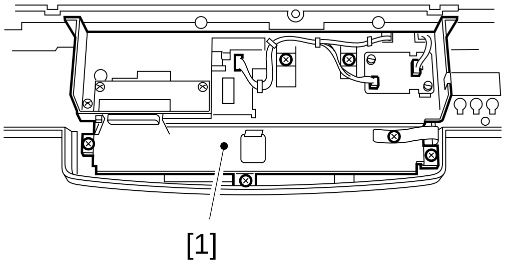


Figure 10-517

2) Remove the four screws, and remove the two flat cables; then, detach the LCD PCB [2].
3) Remove the four screws, remove the flat cable, and disconnect the four connectors; then, detach the CPU PCB [3].

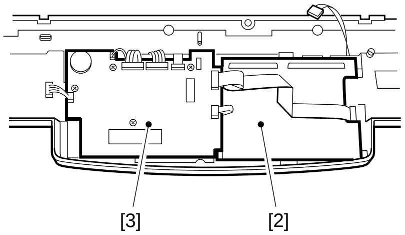


Figure 10-518

4) Remove the three screws, and disconnect the connector; then, detach the DC PCB [4] and the support plate [5].

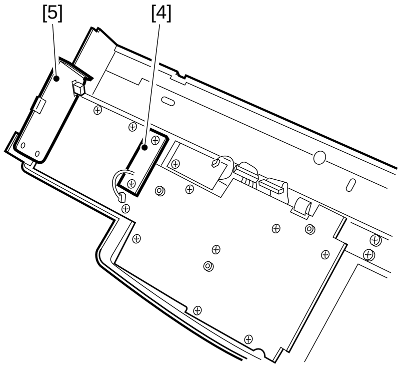


Figure 10-519

5) Remove the ten screws, and detach the key switch PCB [6].

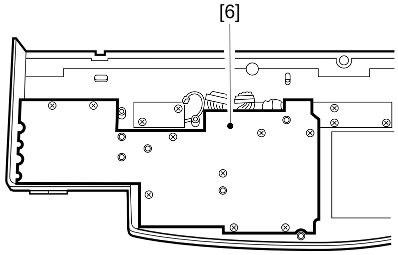


Figure 10-520

D. DC Controller PCB

1) Disconnect the power plug.
2) Remove the four screws, and detach the rear cover.
3) Remove the three screws, and detach the flywheel.
4) Remove the screw [2], and disconnect the connector [3]; then, detach the cleaner cooling fan [1] together with its stay.

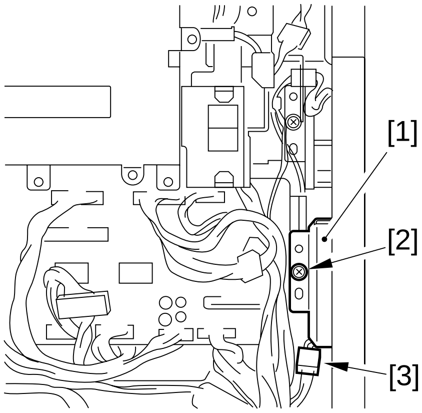


Figure 10-521

5) Remove the eight screws [4], and disconnect all connectors; then, detach the DC controller PCB [5].

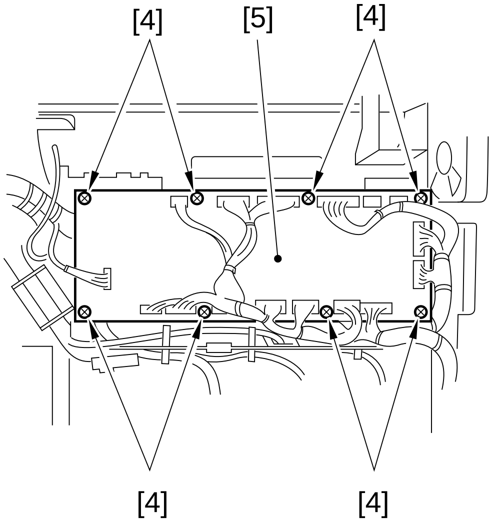


Figure 10-522

E. Composite Power Supply PCB

1) Disconnect the power plug; then, remove the rear cover and the flywheel.
2) Remove the two screws, and detach the connector mount [1].
3) Disconnect the connector [2], and remove the relay 3 form the power supply mount.
4) Remove the two screws [5], and disconnect all connects; then, detach the composite power supply.

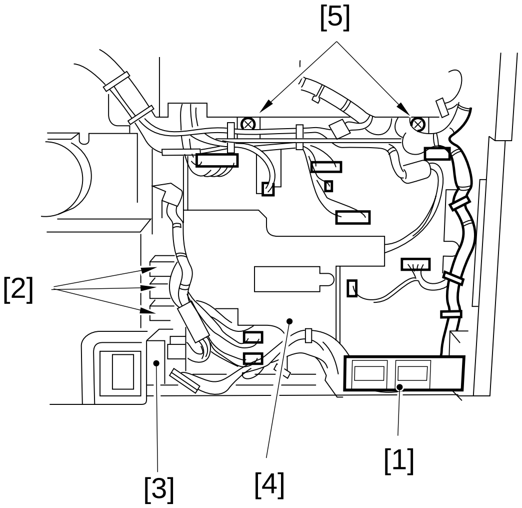


Figure 10-523

F. Low-Voltage Power Supply PCB

1) Remove the right cover.
2) Remove the two screws, and disconnect all connectors; then, remove the power cord mount [1].

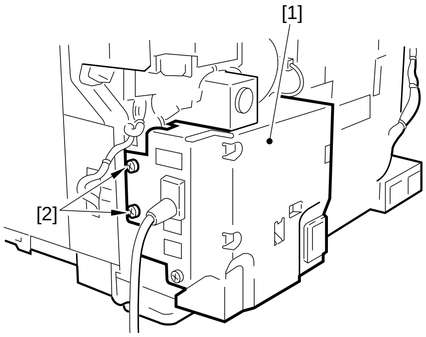


Figure 10-524

3) Remove the screw [4], and disconnect all connectors; then, remove the low-power supply PCB [3].

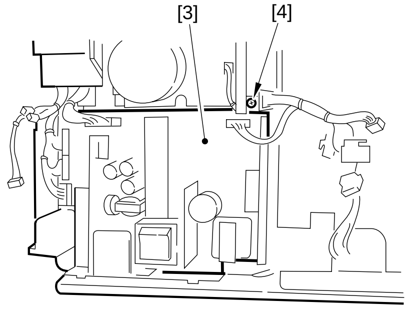


Figure 10-525

Caution:
When mounting the low-voltage power supply, be sure that the insert at its bottom is properly fitted to the copier's bottom plate.

G. Accessories Power Supply PCB

1. Removing the Options PCB

1) Remove the rear cover.
2) Remove the flywheel.
3) Remove the scanner control fan unit (FM17, FM18).
4) Remove the screw [2], and disconnect all connectors; then, detach the accessories power supply PCB [1].

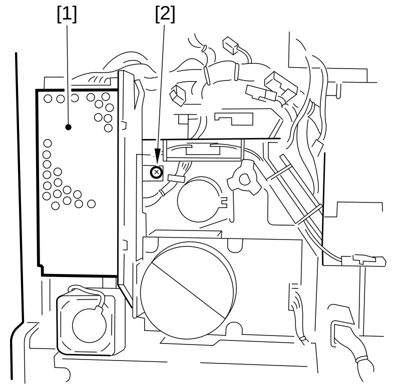


Figure 10-526

2. Mounting the Options PCB

1) Remove the screw from the rear of the copier's right cover,and displace the rear of the right cover toward the outside.
2) Fit the hooks on the PCB in the cut-offs shown in the figure to mount.

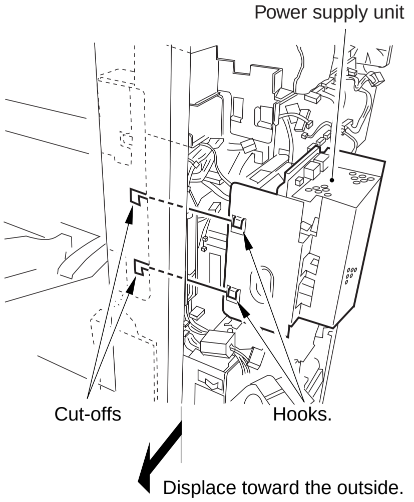


Figure 10-526-1

H. Fans

Caution:
If the screws used to mount the fan are not tightened fully, abnormal noise may be heard when the fan is rotating. Be sure to tighten the screws fully when mounting the fan.

1. Feeder Fan (FM1)

1) Remove the screw, and detach the transfer charging roller unit from the feeding assembly.
2) Remove the feeding assembly.
3) Remove the three bushings [1], and disengage each hook of the gear [2]; then, detach it.
4) Remove the screw, and detach the static eliminator [3].
5) Move the feeder fan assembly [4] in the direction of the arrow in the figure to detach it from the mount.

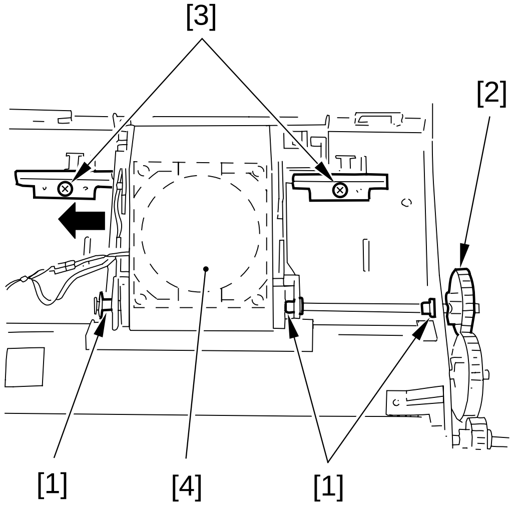


Figure 10-527

6) Disconnect the connector [5], and detach the feeding belt [6] as if to displace it.

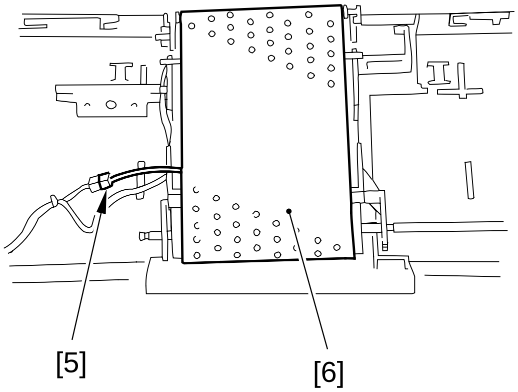


Figure 10-528

7) Disengage the hook [8] of the feeder fan cover [7] with a small flat-blade screwdriver, and detach the cover.
8) Remove the feeder fan [9].

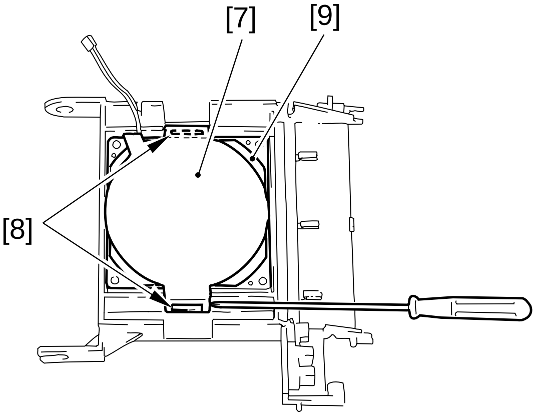


Figure 10-529

2. Fixing Assembly Heat Discharge Fan 1/2 (FM2/3)

1) Open the front door.
2) Open the delivery assembly.
3) Remove the screw 1, and disconnect the heat discharge connector cover 2.

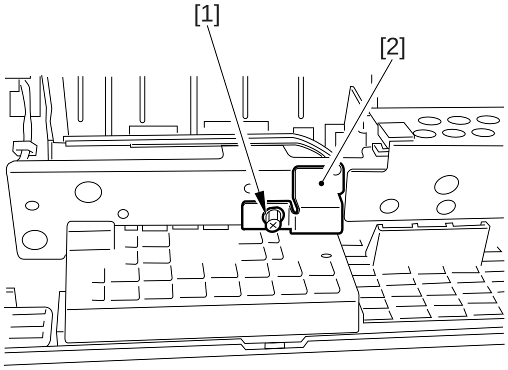


Figure 10-529-1

4) Disengage the hooks [3] [4], and detach the fan cover.

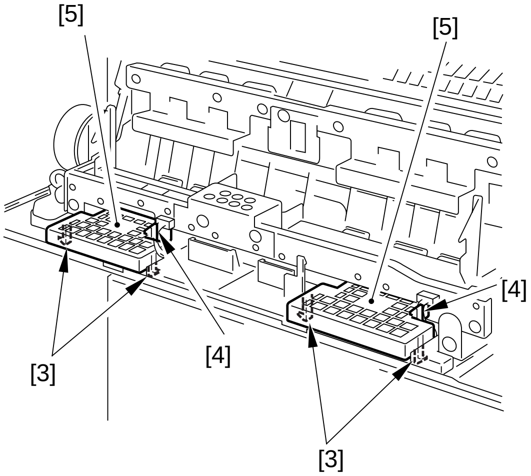


Figure 10-530

5) Disconnect the connector [6], and disengage the hook [7]; then, detach the fixing assembly heat discharge fan [8].

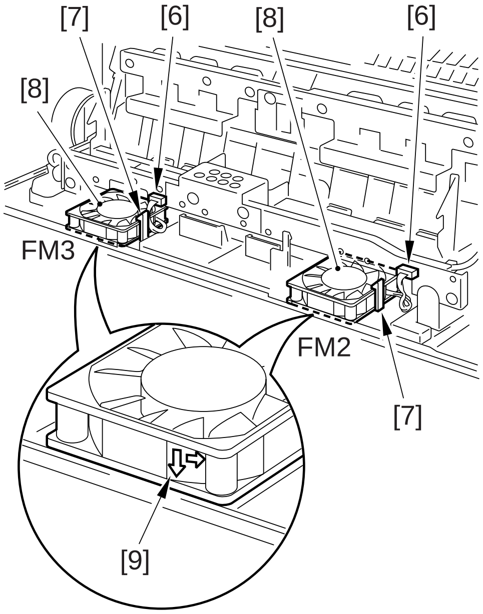


Figure 10-531

Caution:
When mounting the fan, be user that the current of air [9] will be toward the outside.

3. Laser Cooling Fan (FM4)

1) Remove the rear cover.
2) Remove the filter [1].
3) Disconnect the connector [2], and disengage the hook [3]; then, remove the laser cooling fan [4].

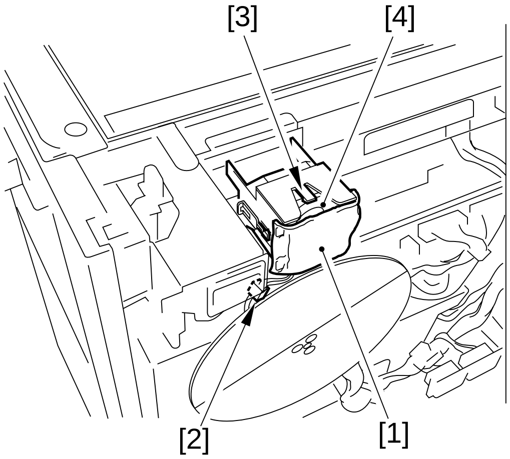


Figure 10-532

Caution:
When mounting the fan, be sure that the direction of the arrow [5] (indicating the direction of air current) marked on the fan guide and the direction of the current [6] on the fan exterior match.

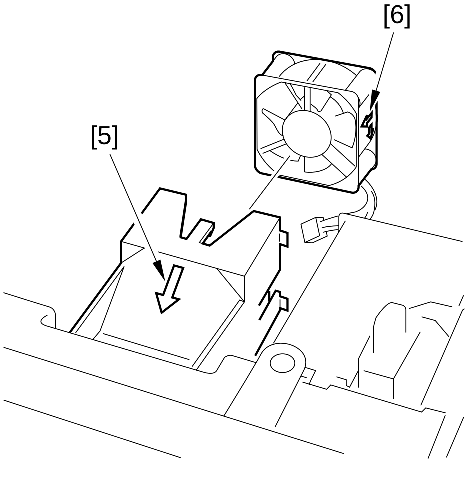


Figure 10-533

4. Laser Scanner Motor Cooling Fan

- FM5

1) Open the front cover.
2) Remove the inside cover.
3) Disconnect the connector [1], remove the wire saddle [2], and remove the screw; then, detach the laser scanner motor cooling fan (FM5) together with its cover.

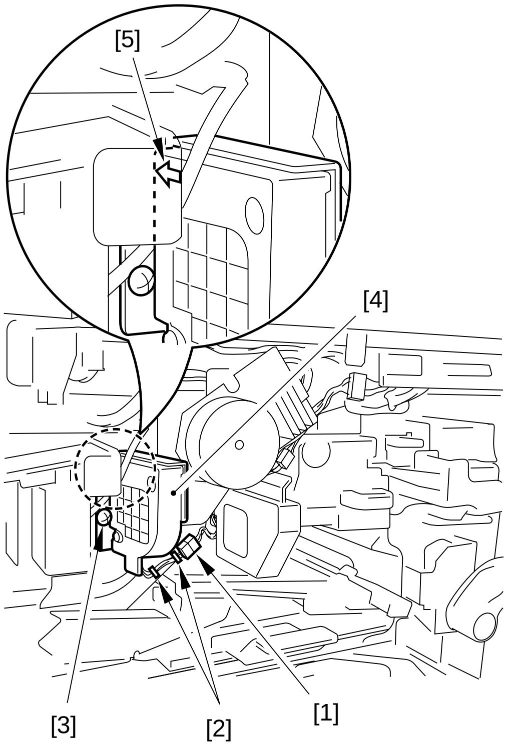


Figure 10-534

Caution:
When mounting the fan, be sure that the marking (arrow indicating the direction of air current) and the marking on the fan will match.

- FM6

1) Open the front cover.
2) Release the feeding assembly lever and the developing assembly lever.
3) Remove the screw [1], and detach the drum cartridge [2].

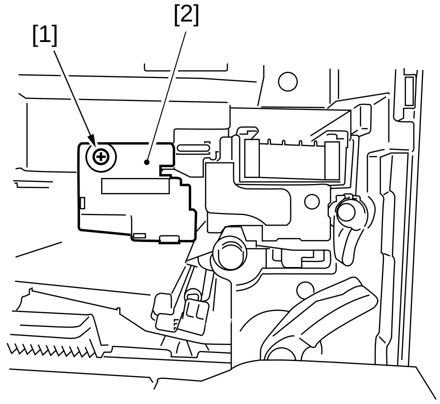


Figure 10-535

4) Disconnect the connector [3], and remove the screw [4]; then, slide out the drum cartridge stay [5] to the front.
(At this time, take care so that the rear of the stay will not come into contact with the developing cylinder.)

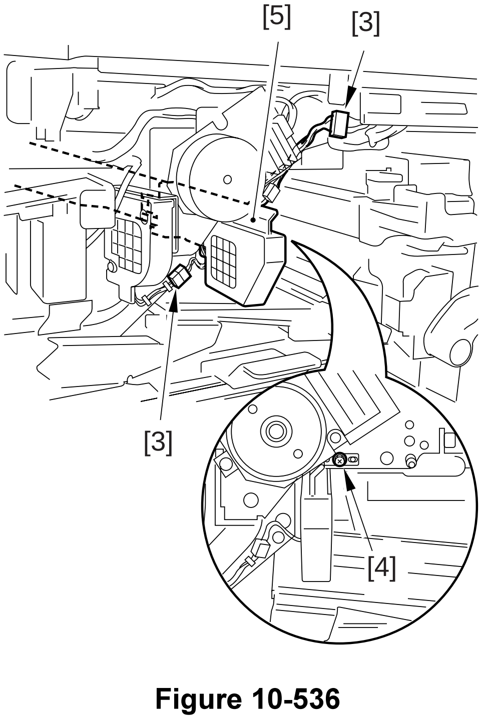


Figure 10-536

5) Release the claw, detach the fan cover [6].
6) Remove the ruse band [7], and cut the tie-wrap to detach the fan.

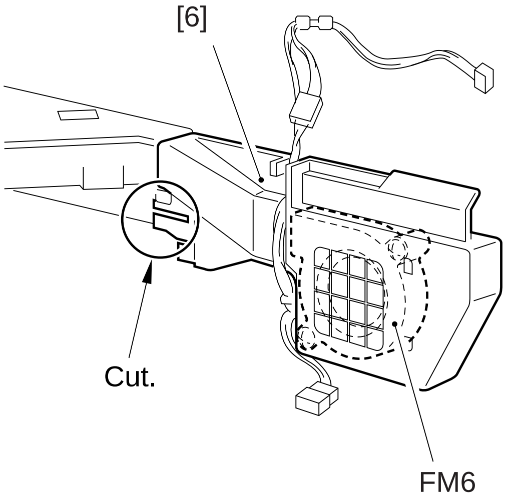


Figure 10-537

5. Cleaner Heat Discharge Fan (FM7)

1) Open the front cover.
2) Remove the screw [1], and disconnect the connector [2]; then remove the fan together with the stay [3].

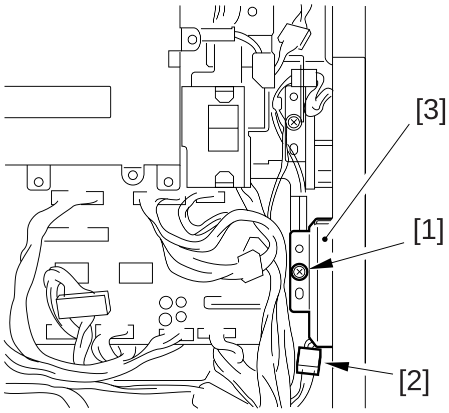


Figure 10-538

3) Remove the screw [4], and detach the fan [5].

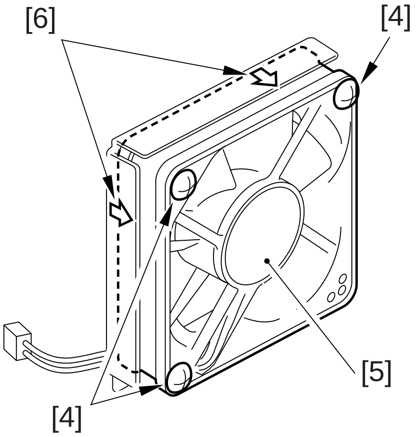


Figure 10-539

> **Caution:**
> When mounting the fan, be sure that the marking (arrow indicating the direction of air current) and the marking on the fan will match.

6. System Cooling Fan (FM8)

1) Disconnect the connector [1], and remove the screw [2]; then, detach the fan [3] together with the stay.

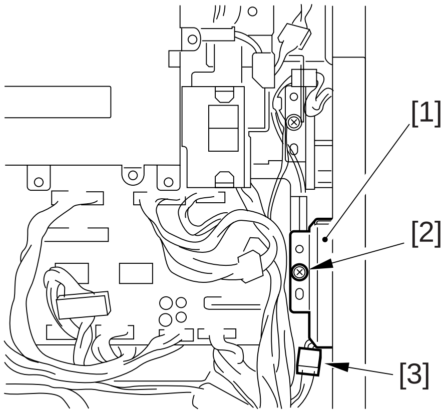


Figure 10-540

2) Remove the screw [4], and detach the fan [5].

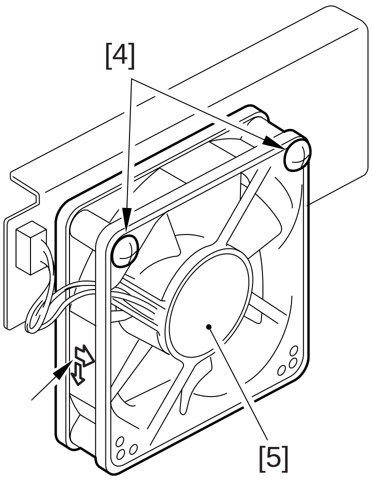


Figure 10-541

> **Caution:**
> When mounting the fan, be sure that the marking (arrow indicating the direction of air current) and the marking on the fan will match.

7. Reversing Guide Cooling Fan (FM9)

1) Open the front door, and open the delivery assembly.
2) Remove the screw [1], and disconnect the connector [2]; then, detach the fan cover [3].

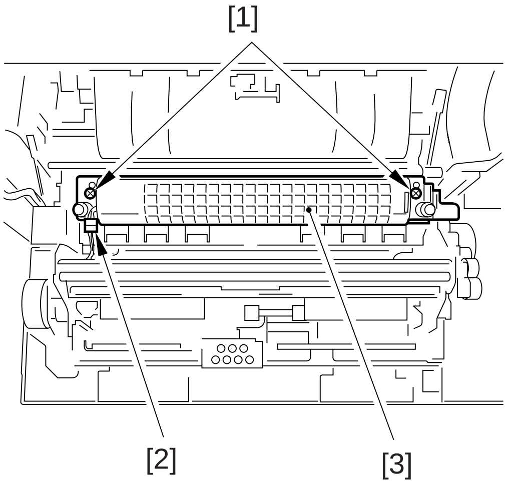


Figure 10-542

3) Remove the screw [4], and detach the fan [5] (FM5).

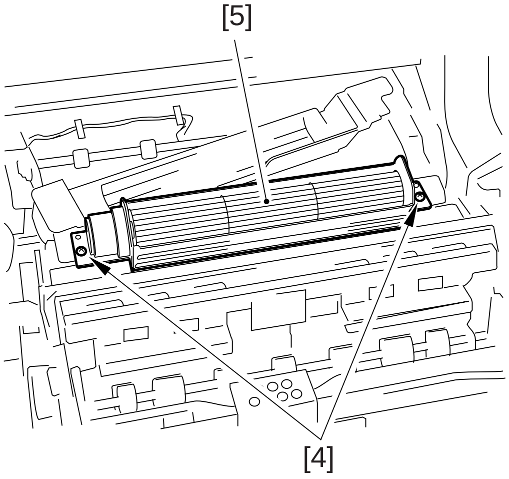


Figure 10-543

8. Low-Voltage Power Supply Cooling Fan (FM10, FM11)

1) Remove the rear cover.
2) Disconnect the connector [1], and disengage the hook [2]; then, detach the fans (FM10, FM11).

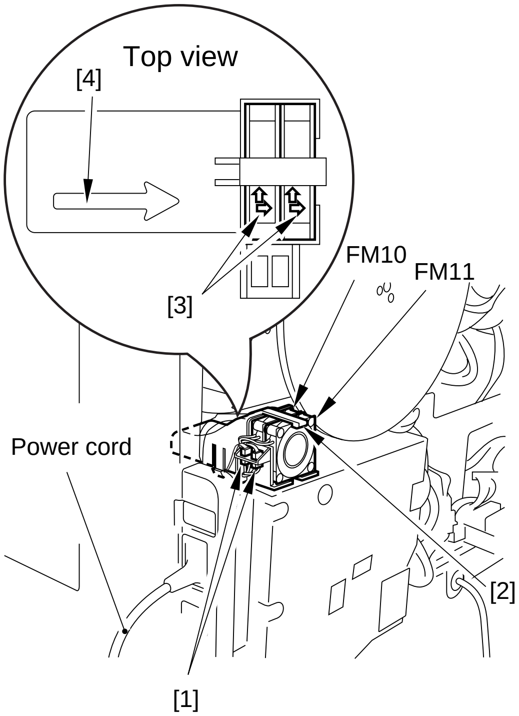


Figure 10-544

Caution:
When mounting the fan, be sure that the marking (arrow indicating the direction of air current) and the marking on the fan will match.

9. Reader Cooling Fan (FM12, FM13)

1) Remove the left cover.
2) Free the harness [2] from the wire saddle [1], disconnect the connector [3], and remove the screw [4]; then, detach the fans (FM12, FM1).

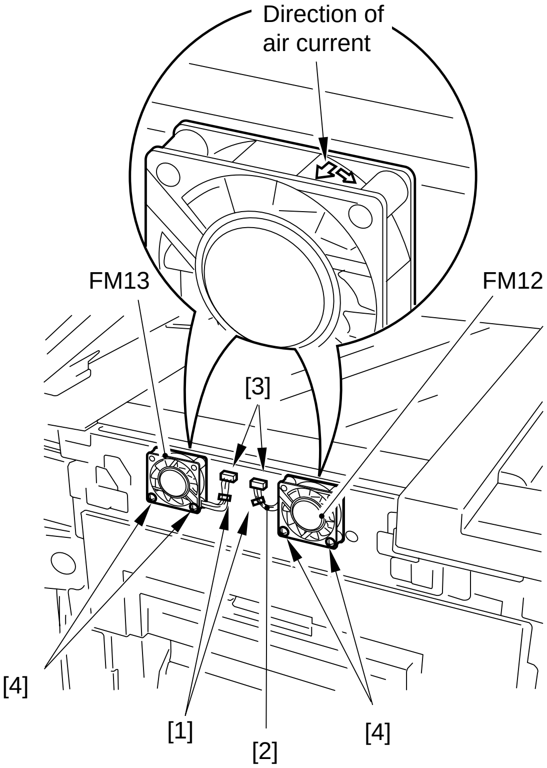


Figure 10-545

Caution:
When mounting the fan, make sure of the following:
- The direction of air current is as indicated.
- The harness is retained by the wire saddle.

10. Drum Cartridge Cooling Fans (FM14, FM15, FM16)

- Removing on Its Own

1) Remove the copyboard glass.
2) Remove the ruse band, and disconnect the connector.
3) Remove the two screws, and remove the stay.
4) Remove the fan.

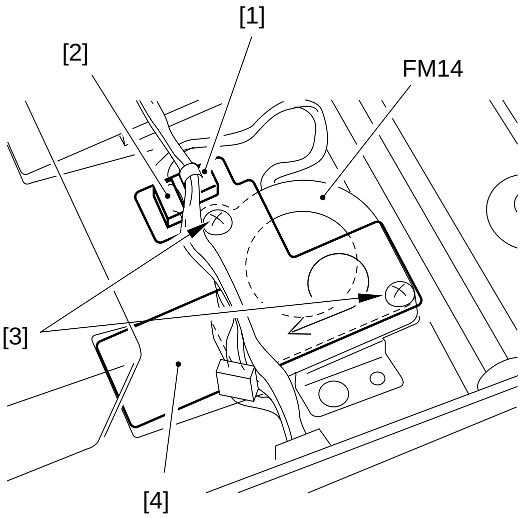


Figure 10-546

- Removing the Three Fans at the Same Time

1) Remove the copyboard glass.
2) Remove the wire saddle 1(rear, front).
3) Remove the ruse band [2], and disconnect the connector [3].

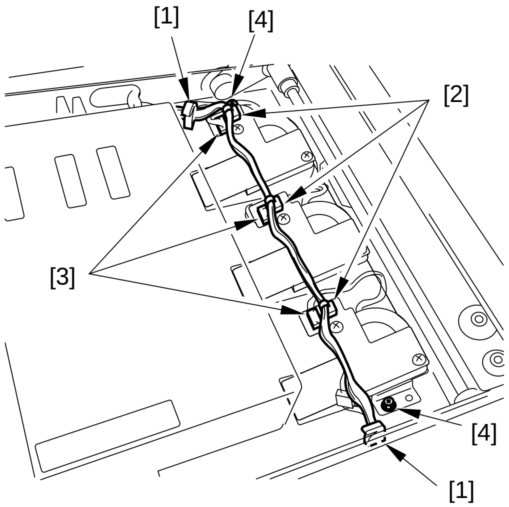


Figure 10-547

4) Remove the two screws 4 (rear, front).
5) Remove the stay, and detach the fan.

Caution:
When mounting FM14, FM15, or FM16, be sure that the marking on the stay [7] will match the rotation of the fan.

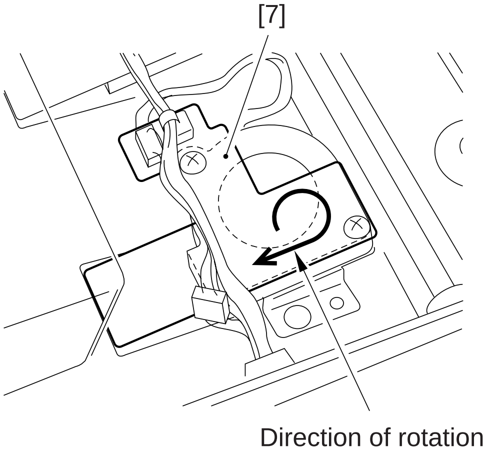


Figure 10-548

11. DC Controller PCB Cooling Fan (FM17)

1) Open the rear cover.
2) Disconnect the connector [1], and remove the two screws [2]; then, detach the fan [3].

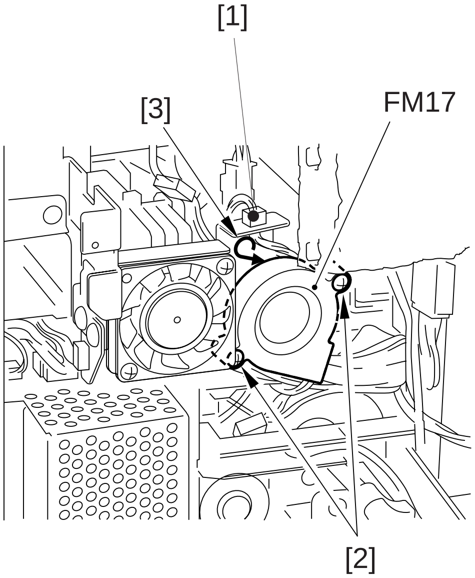


Figure 10-549

Caution:
When mounting the fan, be sure that the marking on the fan will match the direction of air current.

12. Scanner Motor Cooling Fan (FM18)

1) Remove the rear cover.
2) Remove the flywheel.
3) Remove the two screws, and disconnect the fan.

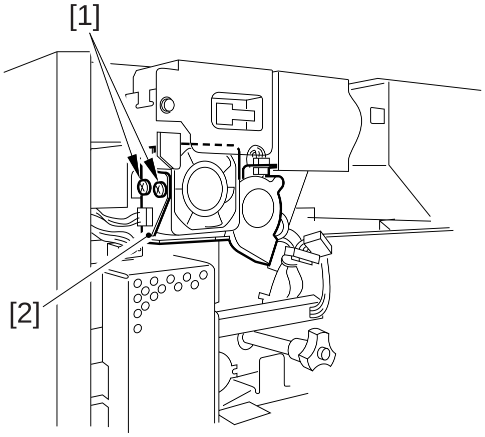


Figure 10-550

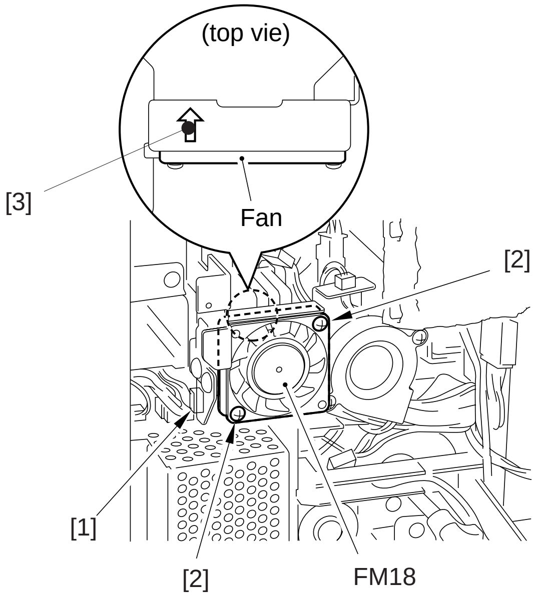


Figure 10-551

Caution:
When mounting the fan, be sure that the direction of the fan will match the marking on the stay.

4) Disconnect the connector, and remove the screw; then, detach the fan.

CHAPTER 11

SYSTEM INTEGRATION

This chapter provides outlines of accessories that may be connected to the machine.

I. SYSTEM INTEGRATION 11-1
  A. Outline 11-1
II. SCSI INTERFACE BOARD 11-4
  A. Outline 11-4
  B. Specifications 11-4
  C. Hardware 11-6
III. DISASSEMBLY/ASSEMBLY 11-7
  A. Basic Expansion Kit 11-8
  B. SCSI Interface Board 11-10
  C. Battery Board 11-11

I. SYSTEM INTEGRATION

A. Outline

The machine is designed to accommodate, in addition to a pickup device, feeder, and sorter, the system accessories shown in Table 11-101.

Study the list of system accessories and arrangement and wiring diagrams; this chapter deals with Nos. 3 and 4; for details of Nos. 1, 2, and 5, see the separately available service manual.

No.	Name	Description
1	Handset-C1	It is a 120-V handset.
2	Super G3 FAX Board-F1	It is a fax board designed to support V.34.
3	SCSI Interface Board-D1	It serves to transmit image data read by the copier to an external computer.
4	Expansion Board Base Unit-C1	It is a prerequisite for building up a system configuration.
5	Printer Board	Printer Board

* Unit in which a fax board and an extension kit are constructed as one.

Table 11-101

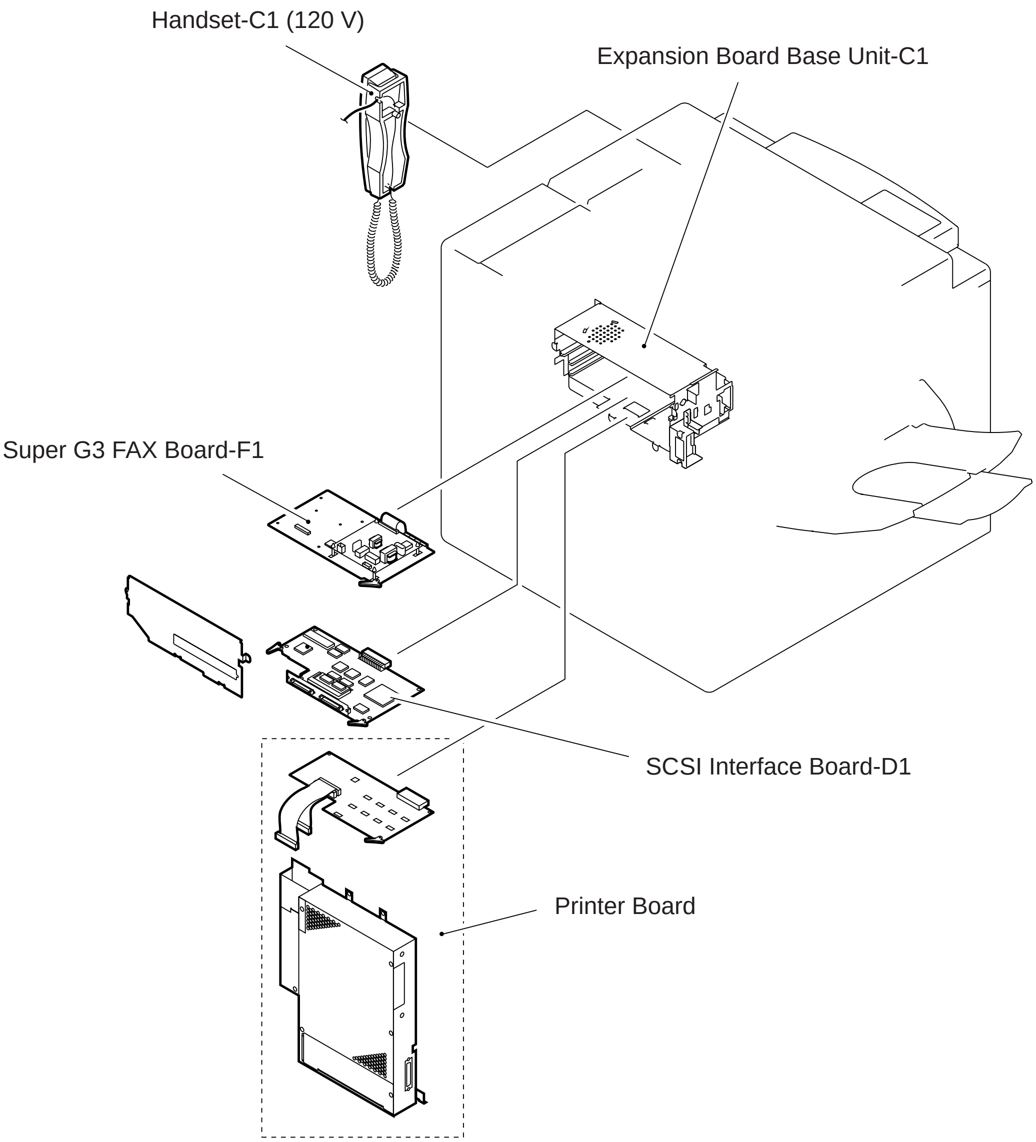

Handset-C1 (120 V)
Expansion Board Base Unit-C1
Super G3 FAX Board-F1
SCSI Interface Board-D1
Printer Board

Figure 11-101-1

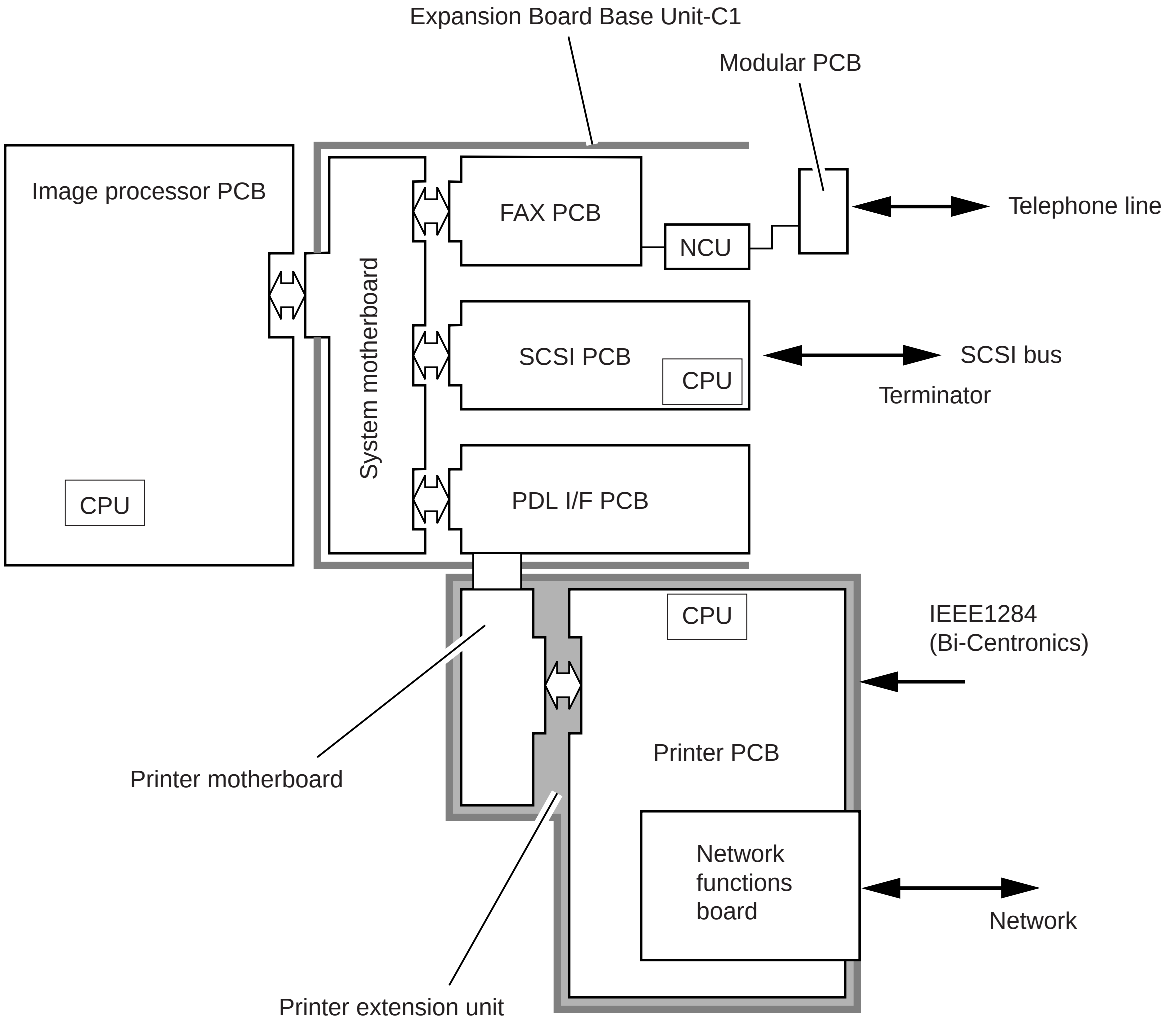

Expansion Board Base Unit-C1
Modular PCB
Image processor PCB
System motherboard
FAX PCB
NCU
Telephone line
SCSI PCB
CPU
SCSI bus
Terminator
PDL I/F PCB
CPU
CPU
IEEE1284
(Bi-Centronics)
Printer motherboard
Printer PCB
Network
functions
board
Network
Printer extension unit

Figure 11-101

II. SCSI INTERFACE BOARD

A. Outline

This board is connected by means of a SCSI interface and is deigned to provide its host copier with scanner functions.

B. Specifications

Item	Description	
Scan type	Copyboard cover, feeder	
Scan range	A3 to A7	
Resolution	2400 to 150 dpi (set in units of 1 dpi)	
Image density setting	Manual	9 settings
	AE	ABC (no pre-scanning)
	Others	Set on the driver side
Image type, gradation	Binary	Simple binary/ED
	Gradation	16/256 gradations
External interface	SCSI-2 compatible	
Memory	Standard 10 MB (on-board)	
CPU	H8/3003 operating frequency of 16 MHz	
EPROM	256 k x 16 bit 85ns (4 Mbit)	

Table 11-201

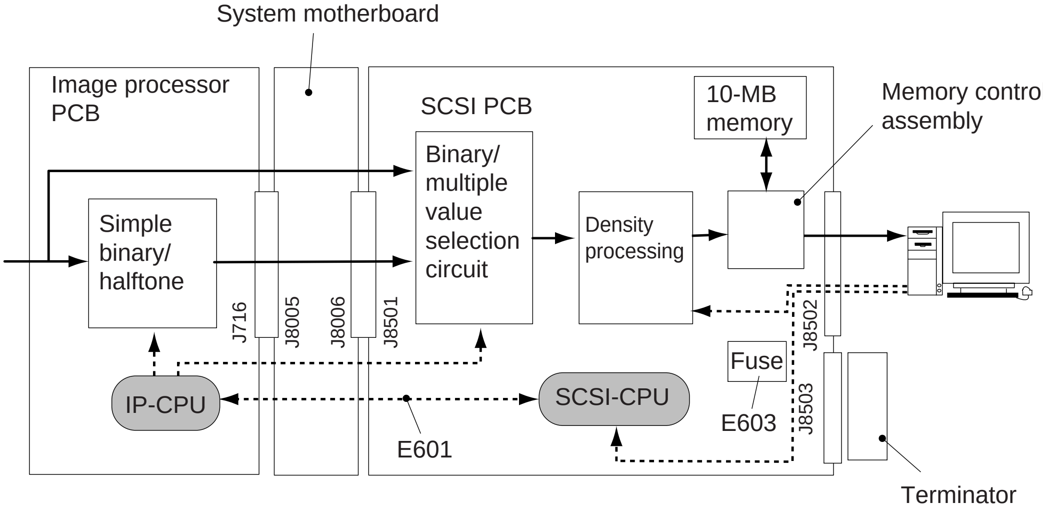

System motherboard
Image processor PCB
SCSI PCB
10-MB memory
Memory controller assembly
Simple binary/ halftone
Binary/ multiple value selection circuit
Density processing
J716
J8005
J8006
J8501
J8502
J8503
Fuse
E603
IP-CPU
SCSI-CPU
E601
Terminator

Figure 11-201

- Terminator
  All SCSI-2 interface connectors are given unique SCSI ID No., requiring you to use an ID No. different from the host computer when connecting the SCSI PCB. If a SCSI-2 interface is used, further, the device at the end of the connection must be equipped with a terminator.

- Setting the Interface Environment
  After connecting the host computer to the SCSI board, you must match the interface types of both. Normally, the interface type of the host computer is changed; if this is not possible, be sure to use the copier's control panel to make appropriate changes.

Caution:
Be sure that the SCSI ID No. is not identical to any of the ID Nos. used by the external devices connected to the system.

- Setting the SCSI ID
  1) Select the SCSI key on the LCD screen.
  2) Press the Off-Line key, and select an ID setting.
  3) Using the +/- key, set a SCSI ID.
  4) Turn off and then on the main power.

- Related Error Codes

E601	error in communication between SCSI board and machine
E603	blown SCSI fuse

For details, see "Self Diagnosis" in Chapter 14.

C. Hardware

The following shows the connectors, LED, ROMs, and fuse used on the board:

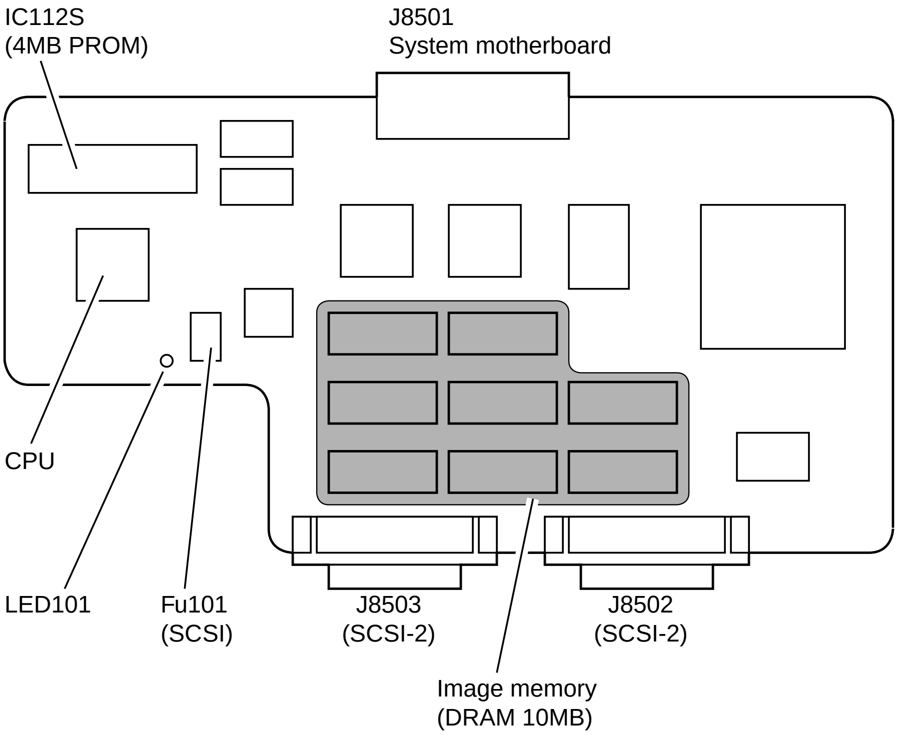

IC112S
(4MB PROM)
J8501
System motherboard
CPU
LED101
Fu101
(SCSI)
J8503
(SCSI-2)
J8502
(SCSI-2)
Image memory
(DRAM 10MB)

Figure 11-202

Item	Description
J8501	Used it for connection to the system motherboard.
J8502/J8503	Use it to connect the host computer/terminator (shared).
Fu 101	Use it to prevent overcurrent to the SCSI PCB. E603 will be indicated when Fu101 blows.
LED 101	<LED is On or Off> The CPU on the SCSI PCB is not operating (faulty PCB). E601 is indicated on the control panel. <LED is Flashing (on for 0.2 sec; remains off longer)> The CPU on the SCSI PCB is operating, but the cable connection is poor or the PCB is faulty. E601 is indicated on the control panel. <LED is Flashing (off and on at intervals of 0.5 sec)> The operation is normal.
IC112S	Used for SCSI.

Table 11-202

III. DISASSEMBLY/ASSEMBLY

The machine possesses the mechanical characteristics discussed in the following pages; go through the instructions given when disassembling/assembling the machine's parts while keeping the following in mind:

1. ⚠ Disconnect the power plug before disassembly/assembly work.
2. Assemble the parts by reversing the steps used to disassemble them, unless otherwise noted.
3. Identify the screws by type (length, diameter) and location.
4. Do not operate the machine with any of its parts removed, unless otherwise mentioned.
5. Do not remove any screws that are paint-locked in place during disassembly work.

A. Basic Expansion Kit

1. Removing the Basic Expansion Kit

1) Check to make sure that the Communication Memory lamp is off; then, turn off the main power.

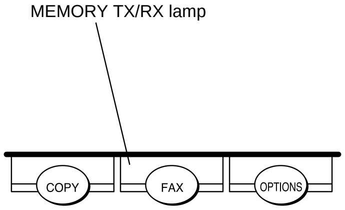

MEMORY TX/RX lamp
COPY
FAX
OPTIONS

Figure 11-301

2) Remove the rear cover and the flywheel.

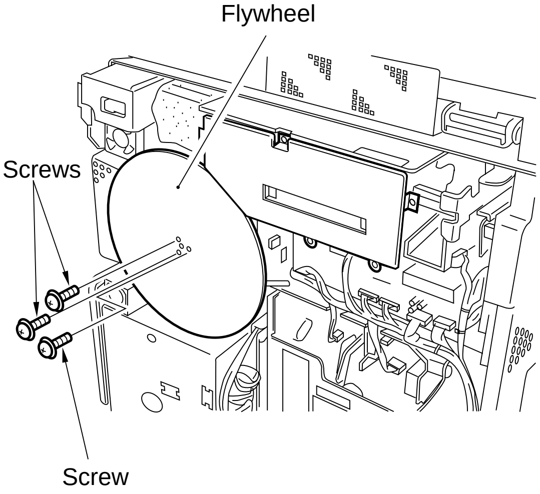

Flywheel
Screws
Screw

Figure 11-302

3) Remove the five screws, and detach the extension case cover.

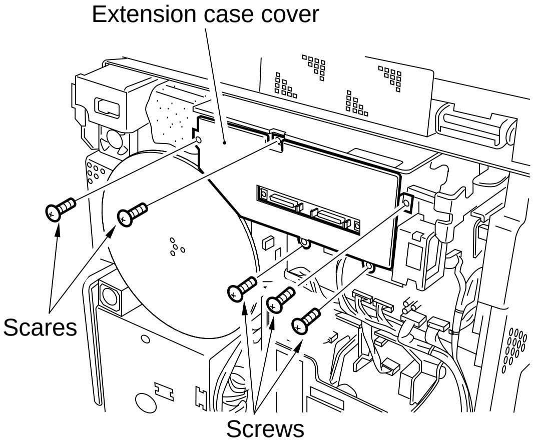

Extension case cover
Scares
Screws

Figure 11-303

4) If the fax board is installed, disconnect the connector shown in the figure.

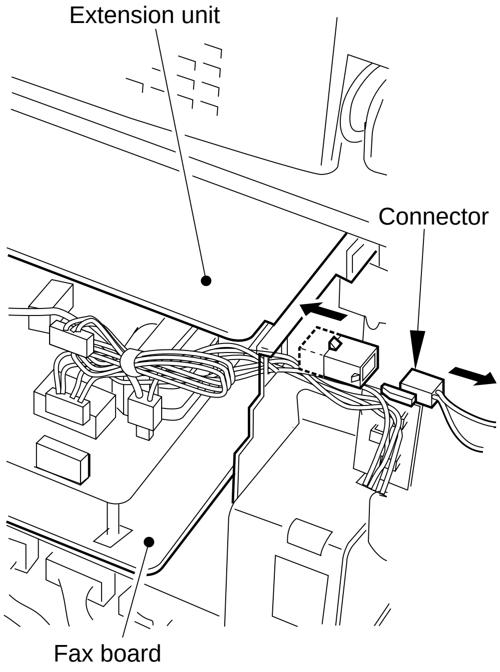

Extension unit
Connector
Fax board

Figure 11-304

5) Disconnect the two connectors shown in the figure.

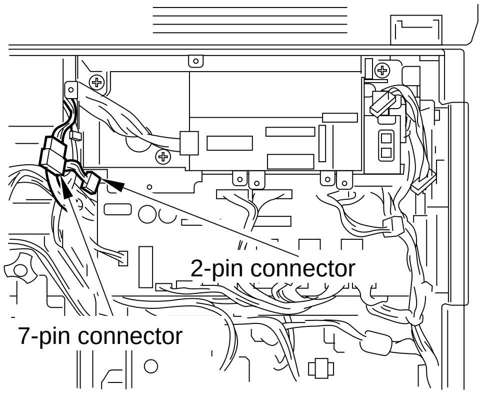

2-pin connector
7-pin connector

Figure 11-305

6) If any boards exist in the extension case, remove them.

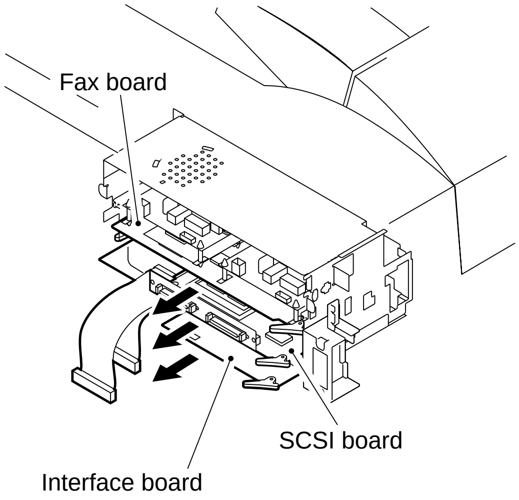

Fax board
SCSI board
Interface board

Figure 11-306

7) Remove the three screws, and detach the extension unit from the copier.

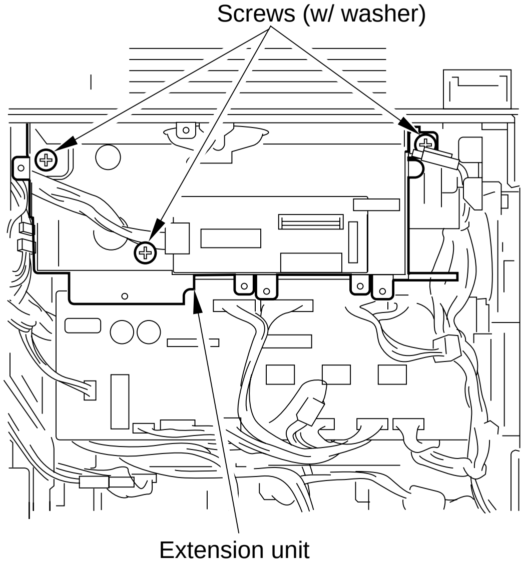

Screws (w/ washer)
Extension unit

Figure 11-307

2. Removing the System Motherboard

1) Remove the extension unit.
2) Remove the accessory boards from inside the extension unit.
3) Remove the five screws, and disconnect the connector; then, detach the system mother board from the extension unit.

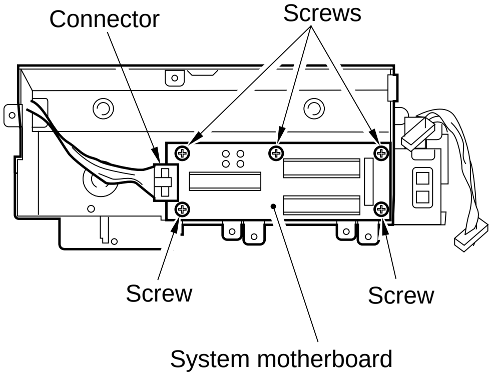

Connector
Screws
Screw
Screw
System motherboard

Figure 11-308

Caution:
If you are installing the extension unit to the copier, make sure that the connector screw holes are positioned as shown before fitting the screw.

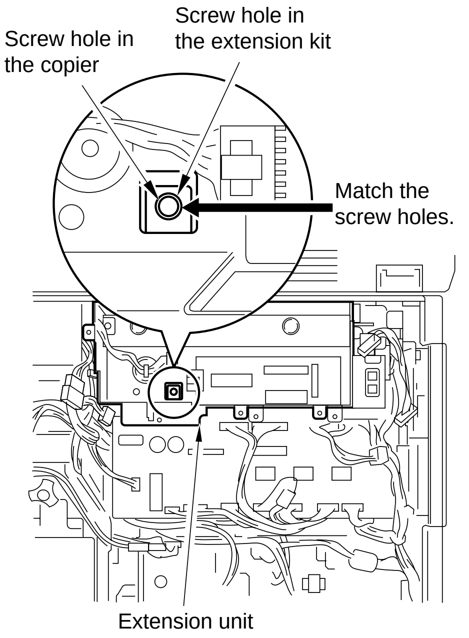

Screw hole in the copier
Screw hole in the extension kit
Match the screw holes.
Extension unit

Figure 11-309

B. SCSI Interface Board

1. Removing the SCSI Interface Board

1) Check to see that the Communication Memory lamp is off; then, turn off the main power.
2) Remove the terminator.

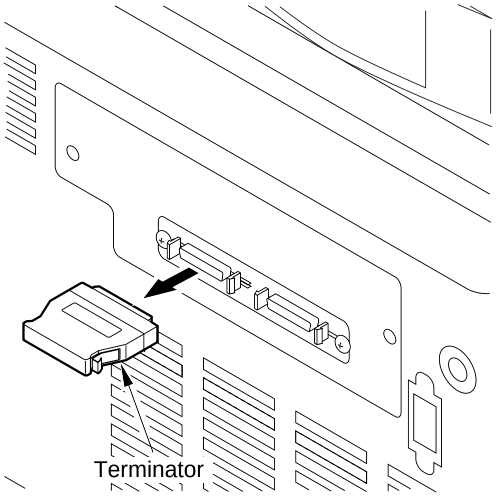

Terminator

Figure 11-310

3) If the printer board is installed, remove the PCL face cover shown in the figure.

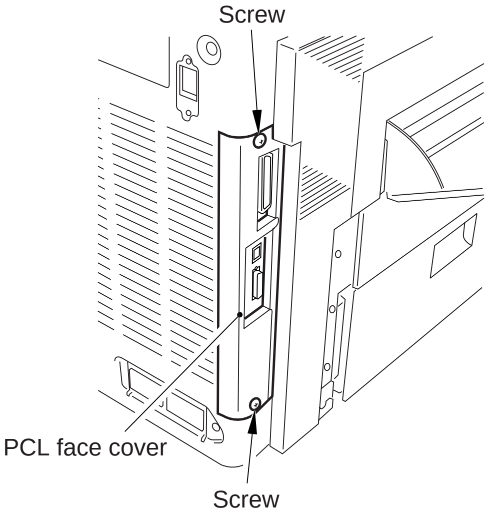

Screw
PCL face cover
Screw

Figure 11-311

4) Remove the rear cover.
5) Remove the five screws, and detach the extension case cover.
6) Pull the lever, and slide out the board from the extension unit.

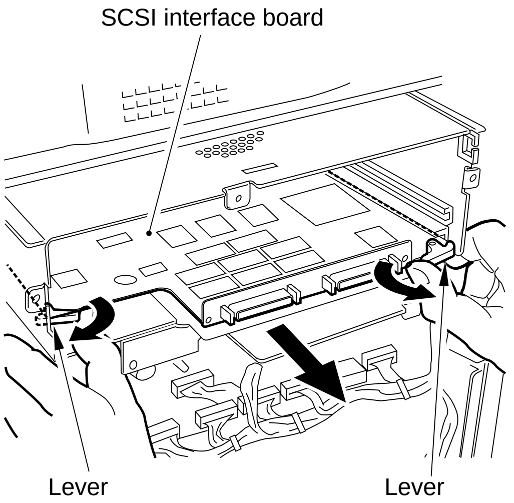

SCSI interface board
Lever
Lever

Figure 11-312

C. Battery Board

> **Caution:**
> When removing or mounting the battery board, take care not to touch the BD unit.

1. Removing the Battery Board

1) Check to make sure that the Communication Memory lamp is off; then, turn off the main power.
2) Remove the copyboard glass retainer (right), and detach the copyboard glass.

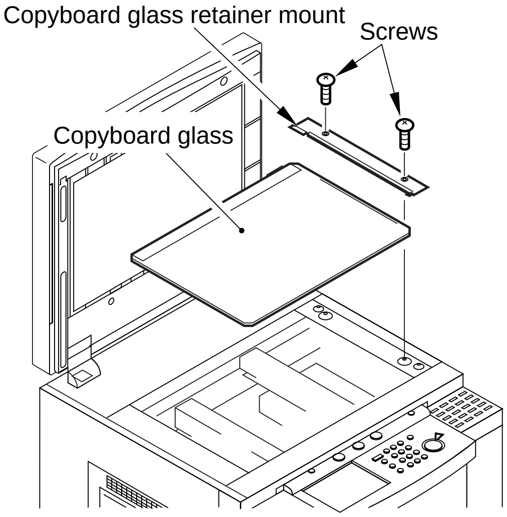

Copyboard glass retainer mount
Screws
Copyboard glass

Figure 11-313

3) Remove the small cover from the IP cover.

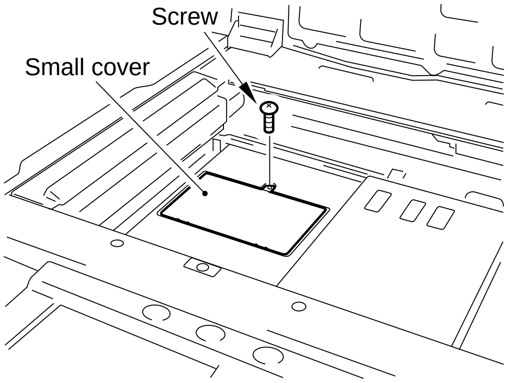

Screw
Small cover

Figure 11-314

4) Slide SW702 to '2' (OFF).

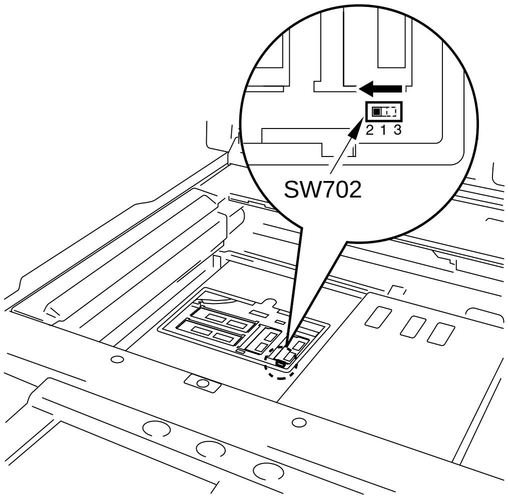


Figure 11-315

5) Free the harness guide of the scanner from the hooks.

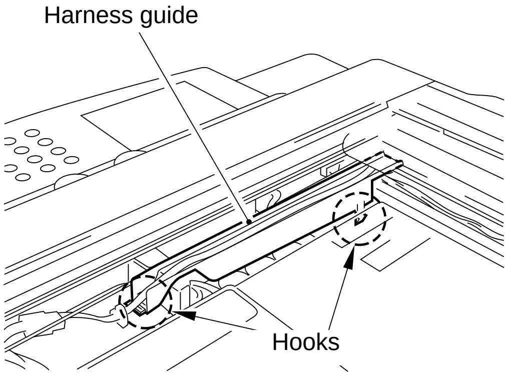

Harness guide
Hooks

Figure 11-316

6) Disconnect the connector shown in the figure.
7) Push the boss on the locking support shown in the figure, and detach the board as if to pull it off the locking support.

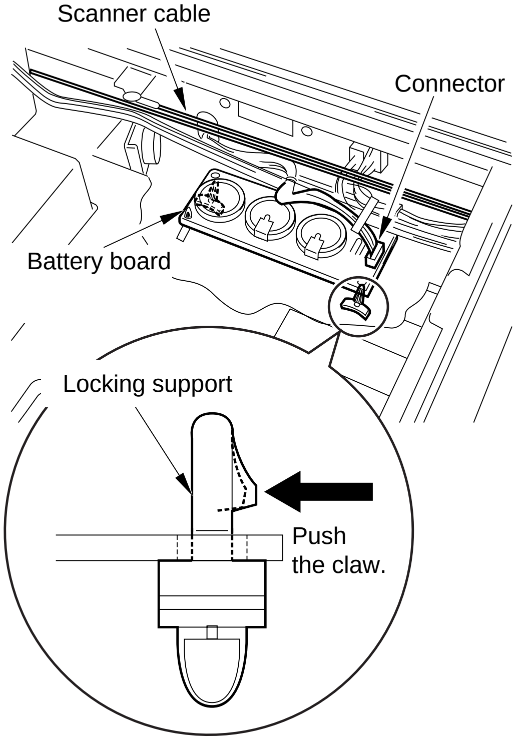

Scanner cable
Connector
Battery board
Locking support
Push
the claw.

Figure 11-317

2. Mounting the Battery Board

1) Mount the battery board securely to the locking support, being careful so that it will not be over the IP cover or the metal plate.
2) After installing the battery board, slide SW702 to '3' (ON).
3) Mount the harness guide, small cover, copyboard glass, and copyboard glass retainer (right).

CHAPTER 12

INSTALLATION

I. SELECTING THE SITE 12-1
II. UNPACKING AND INSTALLATION 12-3
  A. Unpacking and Removing the Fixing Materials 12-4
  B. Supplying Toner 12-7
  C. Stirring the Toner 12-9
  D. Setting the Drum Cartridge . 12-11
  E. Setting the Cassette 12-14
  F. Installing the Feeder (DADF standard model only) 12-16
  G. Making Settings 12-17
  H. Checking the Copy images .. 12-18
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  A. Copy Data Controller-A1 12-33
VI. INSTALLATION OF THE NE CONTROLLER-A1 12-43

I. SELECTING THE SITE

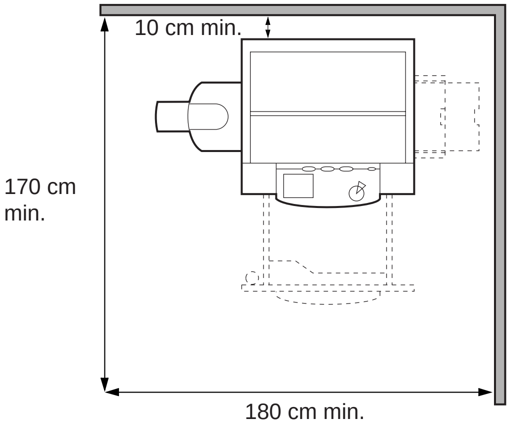
Make sure that the site meets the following requirements; if possible, pay a visit to the user's before the delivery of the machine:

A. The site must provide a power outlet which is rated as specified and which may be used exclusively by the machine.
B. The site must be 7.5°C to 32.5°C in temperature and 5% to 85% in humidity. Avoid water faucets, water boilers, humidifiers, and areas near a refrigerator.
C. Avoid areas near the sources of fire and areas subject to dust or ammonium gas. Avoid areas exposed to direct sunshine; otherwise, be sure to provide curtains.
D. The site must be well-ventilated.
E. The site must be level so that the copier's feet will remain in contact with the floor.
F. The site must be spacious enough so that the copier will be at least 10 cm from all walls, and there wil be enough room for maintenance work. (See the next page.)

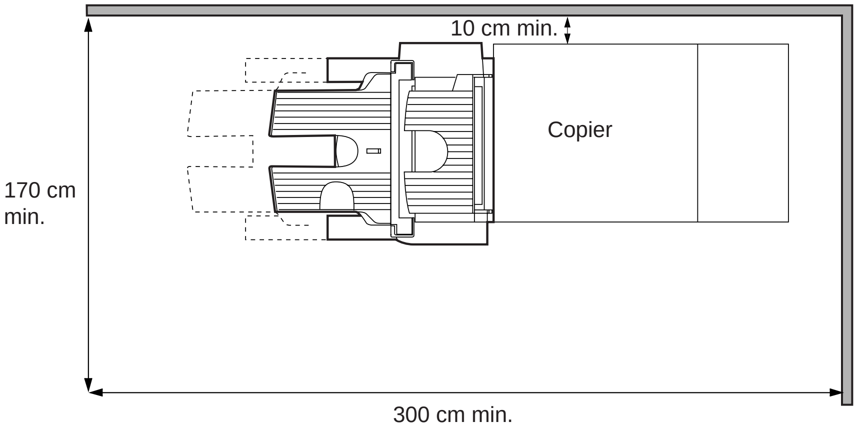
Outline of Work Space

The spatial requirements for maintenance work are as follows:

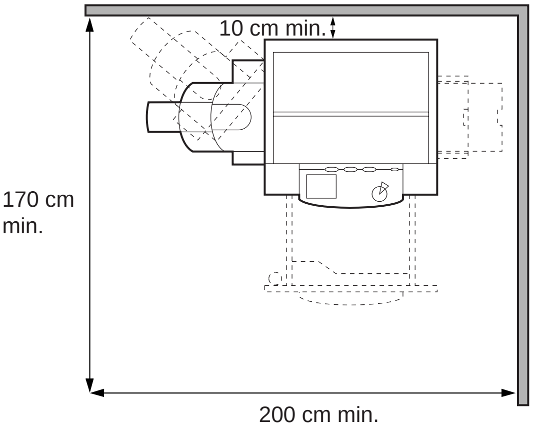
- Copier Only


10 cm min.
170 cm min.
180 cm min.

- Copier + Finisher + Paper Deck


10 cm min.
Copier
170 cm min.
300 cm min.

- Copier + Multi-Output Tray-3


10 cm min.
170 cm min.
200 cm min.

II. UNPACKING AND INSTALLATION

Bringing a piece of metal from a cold to a warm place can cause droplets of water to form on its surface. Such a phenomenon is known as condensation, and a copier suffering from condensation can generate blank copies.

If the copier has been brought in from a cold place, leave it alone for one hour or more without unpacking before starting the installation work.

The unpacking and installation work consists of the following:

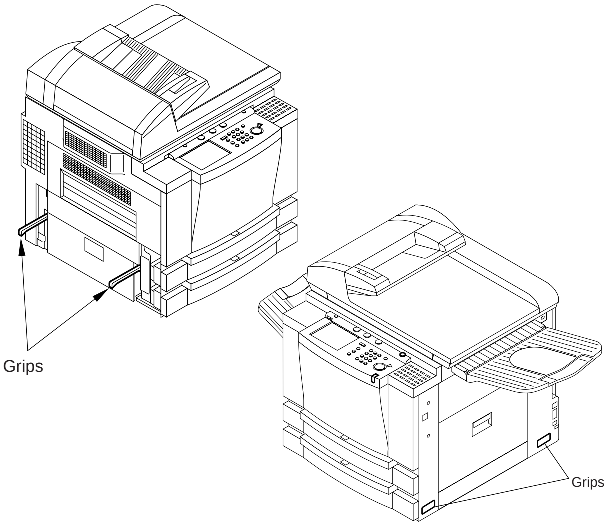
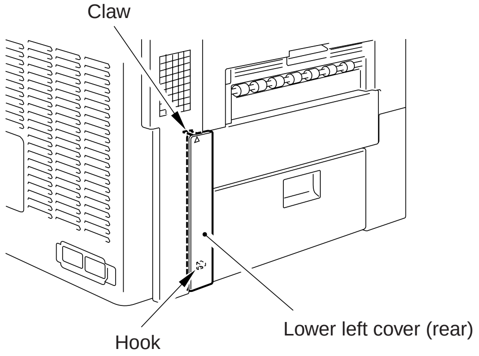
A. Unpacking and Removing the Fixing Materials
B. Supplying Toner
C. Stirring the Toner
D. Setting the Drum Cartridge
E. Setting the Cassette
  - Dial label
  - Size label

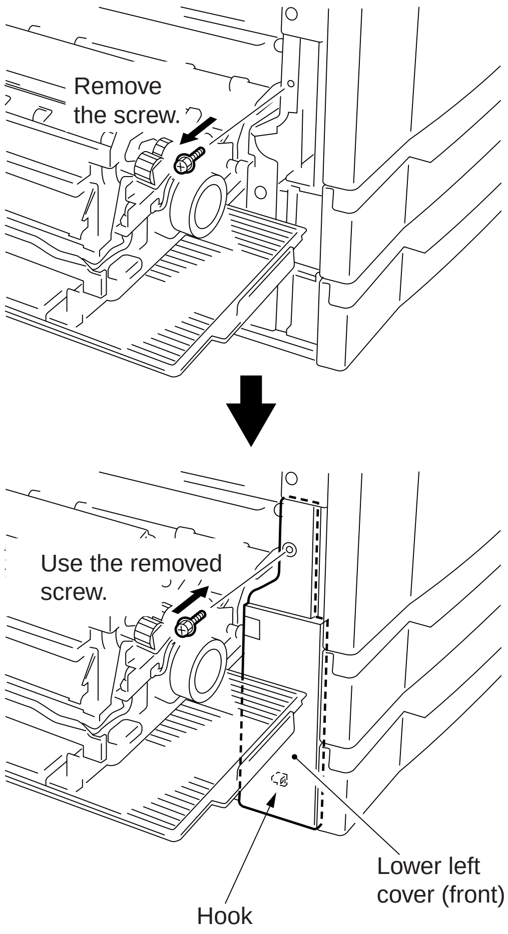
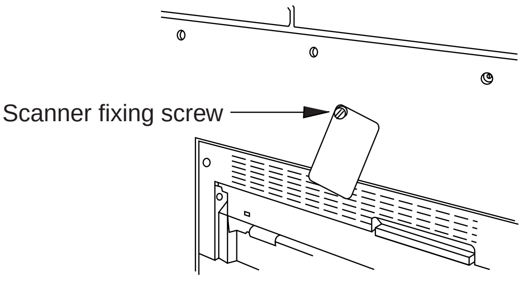
F. Mounting the Feeder Parts
  - Stamp
  - Tray guide

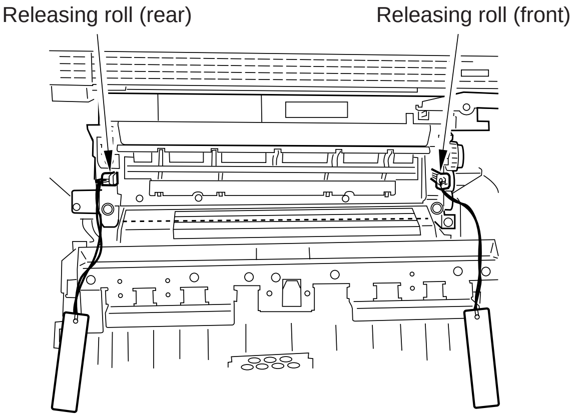
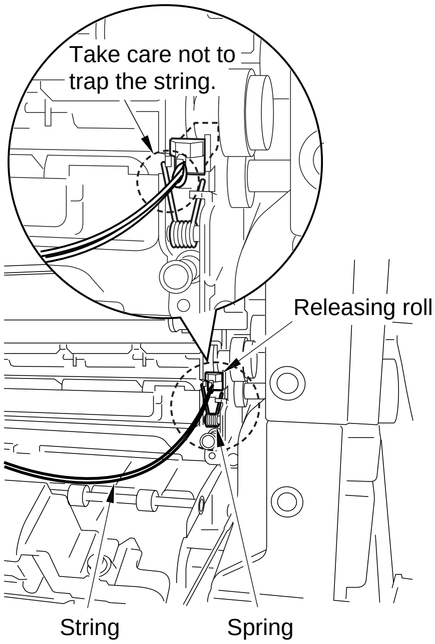
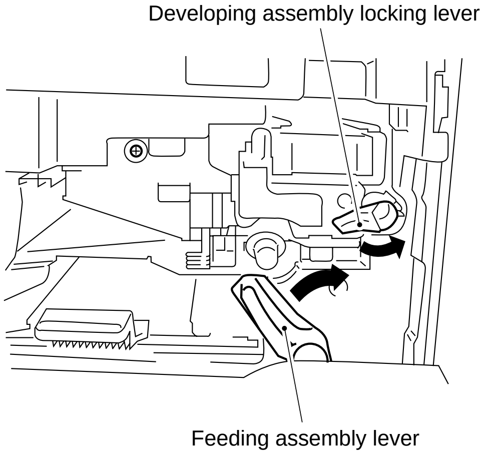
G. Making Settings
H. Checking the Copy Images
  If the images are faulty,
  1. Shading adjustment
  2. Auto density adjustment

A. Unpacking and Removing the Fixing Materials

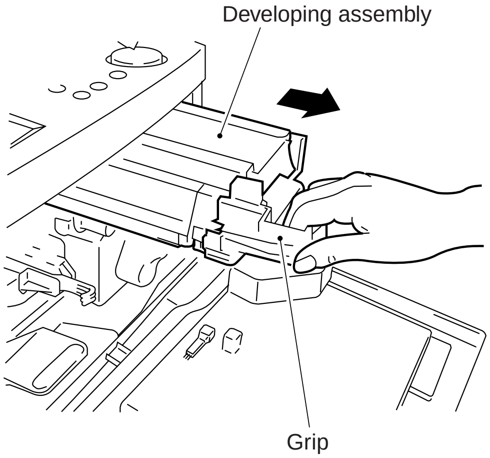
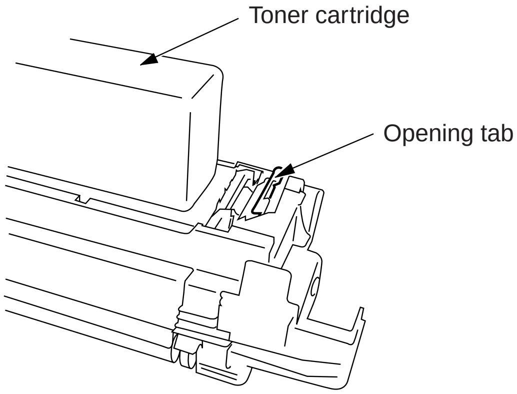
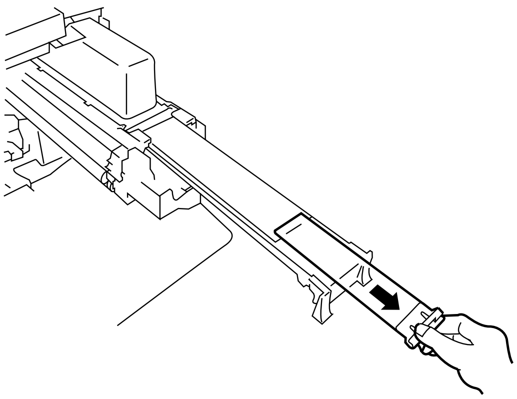
Here, the machine is a model equipped with a DADF as standard.

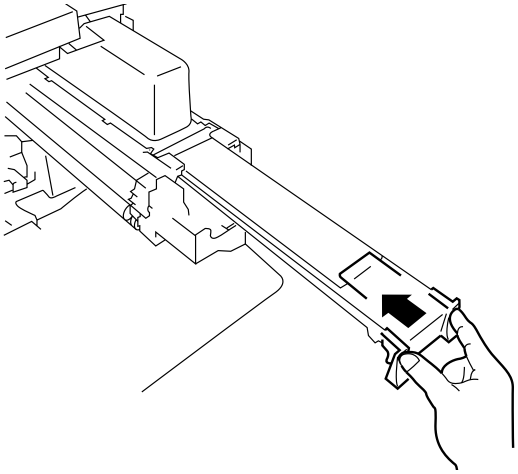
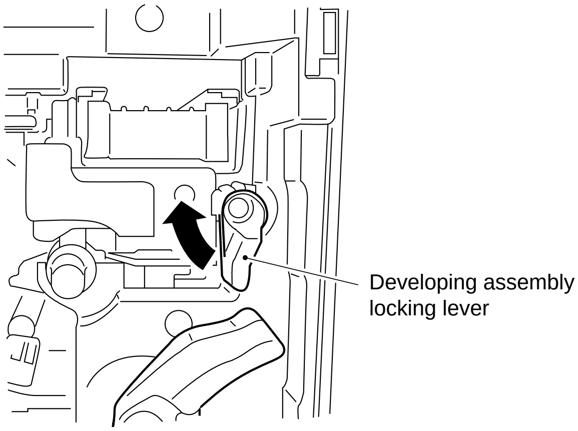
No.	Work	Remarks
1	Unpack the machine, and remove the plastic sheets. If you are installing a cassette pedestal, unpack the pedestal also.	• If you are installing the machine on a cassette pedestal, keep in mind that the vertical path assembly of the pedestal is designed for installation after installation of the machine. • Remove all tape from the covers and from inside the cassette.
2	Holding the grips of the machine (working in a group of two), place it on the cassette pedestal.	
3	Open the cardboard box that comes with the machine, and take out the parts and attachments.	Check to make sure that none of the following is missing: ■ Inside the Cardboard Box • Copy tray • Installation Procedure • Grounding cord • Lower left cover (rear) • Drum unit • Screw for lower right cover • DADF delivery tray unit • Lower right cover (rear) • Lower left cover (front) • Toner • User's Manual (copying) ■ Taped On the DADF Top • Stepped screw • Stamp
4	Mount the lower left cover (rear). • Mount the hook at the bottom; then, push in the snap at the top.	

No.	Work	Remarks
5	Mount the lower left cover (front). 1) Open the front cover, and remove the screw. (See the figure; you will be using the screw when mounting the lower left cover (front).) 2) After mounting the hook (Figure), mount the lower left cover (front) using the screw you removed.	 Remove the screw. Use the removed screw. Hook Lower left cover (front)
6	Remove the scanner fixing screw from the outside of the left cover.	 Scanner fixing screw
7	Slide out the cassette, and remove the packing material from inside (tape).	
8	Open the front door.	

No.	Work	Remarks
9	Open the delivery cover; then, slide the fixing roller releasing roll (front, rear) straight out to the front by pulling on the string. **Caution:** Before pulling on the string to slide out the releasing roll, check to make sure that it is not trapped by the spring shown in the figure.	 Releasing roll (rear) Releasing roll (front)  Take care not to trap the string. Releasing roll String Spring
10	Turn the developing assembly locking lever and the feeding assembly lever in the direction of the arrow (so as to release the developing assembly and the feeding assembly).	 Developing assembly locking lever Feeding assembly lever

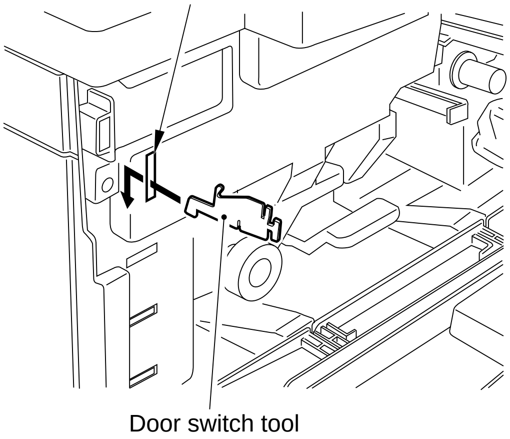
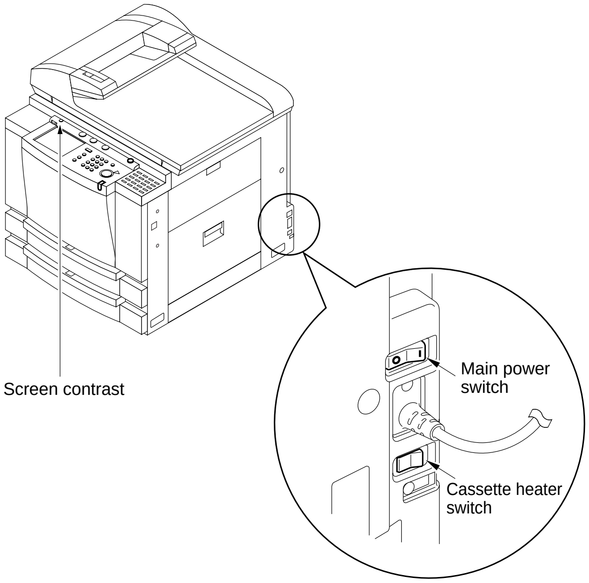
B. Supplying Toner

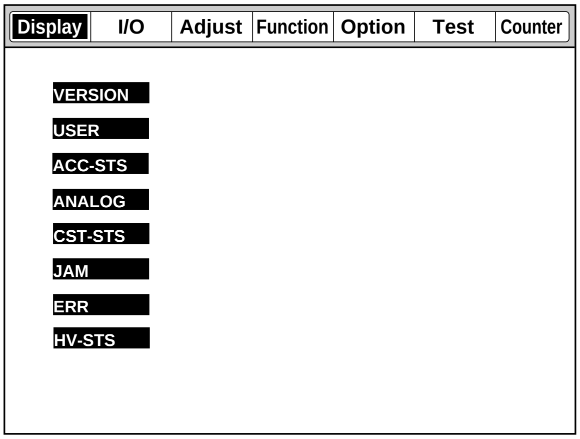
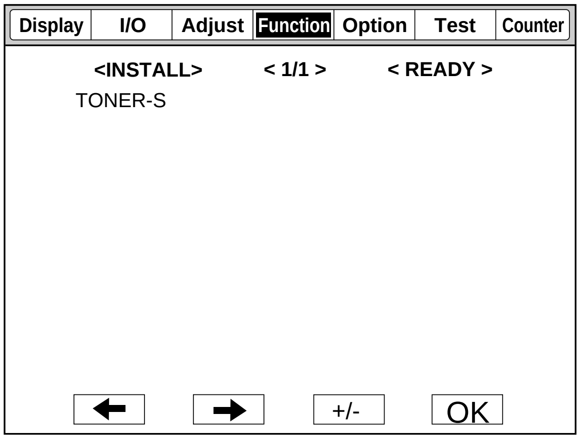
No.	Work	Remarks
1	Holding the grip, pull the developing assembly to the front until it stops.	
2	Shake the toner cartridge several times.	
3	Set the toner cartridge to the developing assembly, and push it down until the opening tab snaps off and springs to the front. • The opening tab snaps off as soon as the toner cartridge is locked to the developing assembly.	
4	While holding the toner cartridge, pull the opening tab to the front until it stops.	

No.	Work	Remarks
5	Tap lightly on the top of the toner cartridge so that toner falls in to the developing assembly.	
6	Push in the black cover of the developing assembly back to its initial position. • Check to make sure that the toner cartridge has separated from the developing assembly.	
7	Detach the toner cartridge.	
8	Push in the developing assembly until it stops.	
9	Turn the developing assembly locking lever in the direction of the arrow to lock the developing assembly in place. Be sure to perform C. "Stirring the Toner."	

C. Stirring the Toner

Caution:
Before stirring the toner, be sure of the following:
- Toner has been supplied.
- The dummy cartridge remains attached. (The drum has not been set.)
- The feeding assembly lever is positioned so that the feeding assembly is released (the front cover is open).

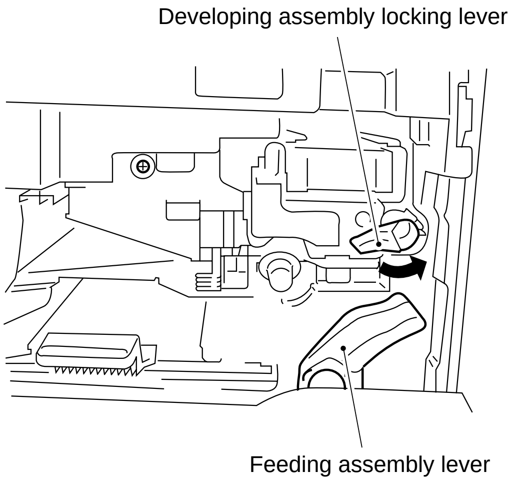
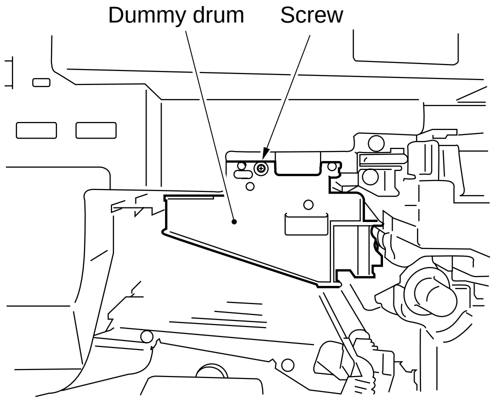
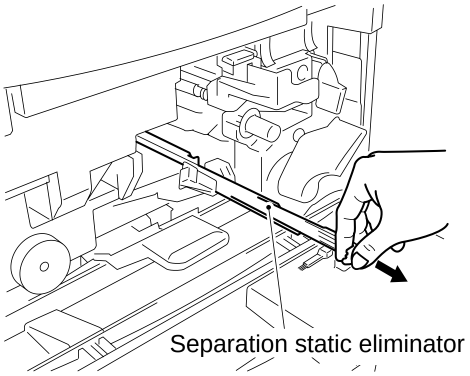
No.	Work	Remarks
1	Insert the door switch tool into the door switch assembly.	 Door switch tool
2	Turn on the main power switch.	 Screen contrast Main power switch Cassette heater switch

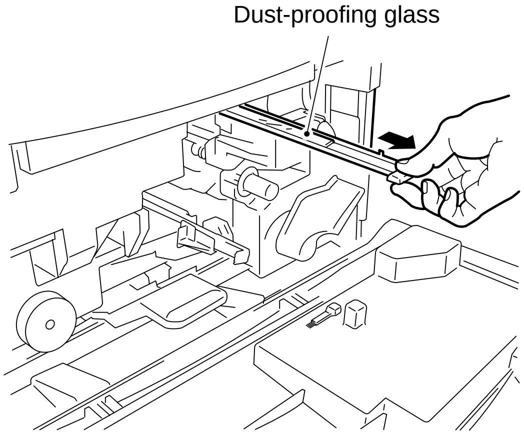
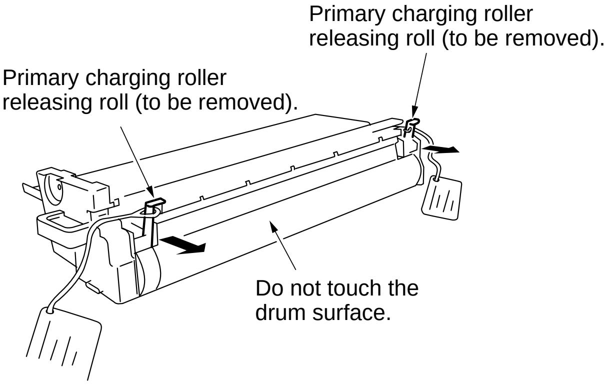
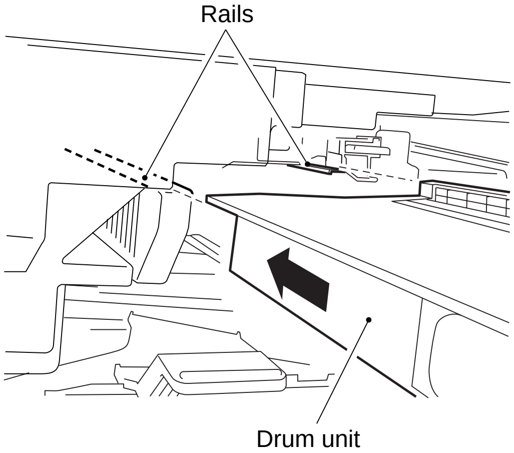
No.	Work	Remarks
3	Start service mode, and execute toner stirring. a. Starting Service Mode 1) press the User Mode key. 2) Press the keys 2 and 8 on the numeric pad at the same time. 3) Press the User Mode key. 4) Press <COPIER> on the screen to highlight. (The Level 2 screen of service mode will appear.)	■ Level 2 Screen of Service Mode  Display I/O Adjust Function Option Test Counter VERSION USER ACC-STS ANALOG CST-STS JAM ERR HV-STS
	b. Execute Toner Stirring 1) Press <FUNCTION>, and press <INSTALL> on the screen that has appeared. 2) Highlight <TONER-S>, and press the OK key to start toner stirring. • Stirring takes 240 sec. Wait unit the count-down reading stops at "0." • yakunuke • To stop in the middle, press the Stop key. • All keys except the Stop key remain disabled during operation. 3) Press the Rest key twice to end service mode.	■ Toner Stirring Screen COPIER>FNCTION>INSTALL>TONER-S  Display I/O Adjust Function Option Test Counter <INSTALL> < 1/1 > < READY > TONER-S +/- OK

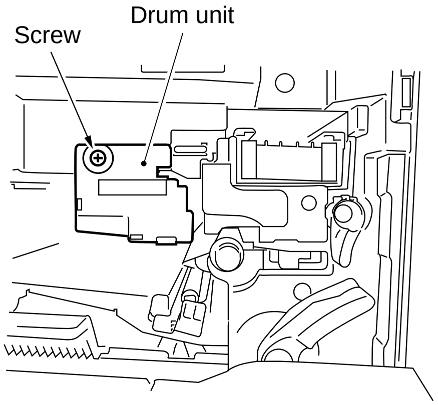
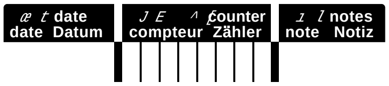
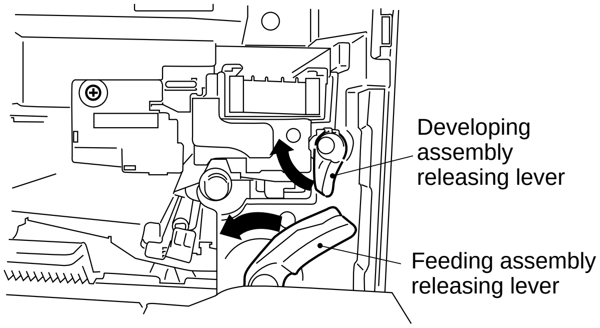
Caution:

Do not execute toner stirring without removing the drum cartridge.

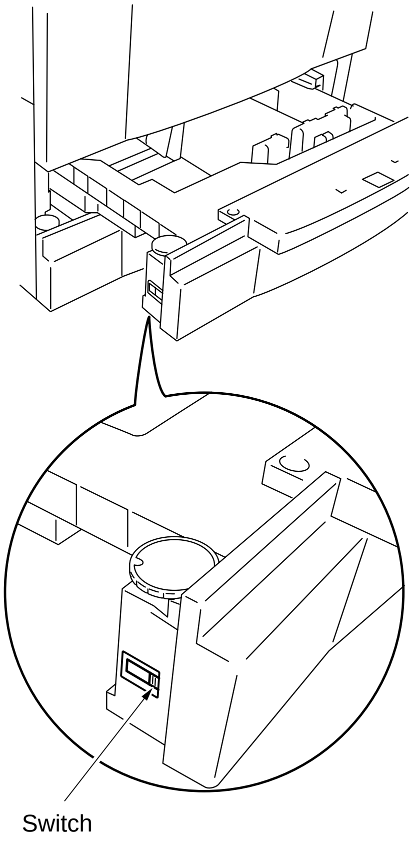
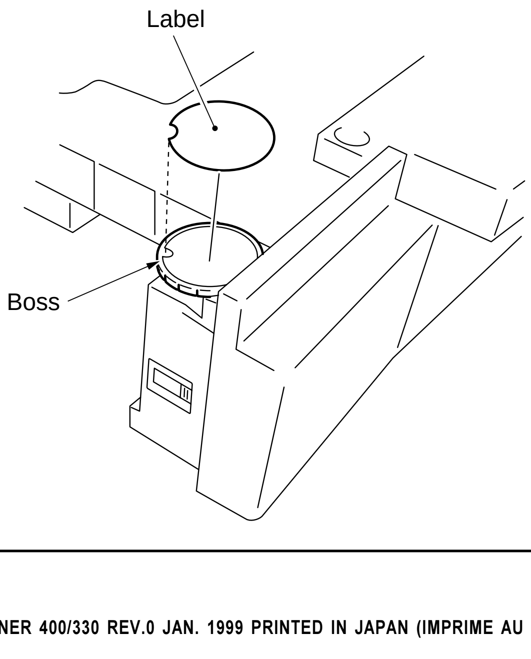
D. Setting the Drum Cartridge

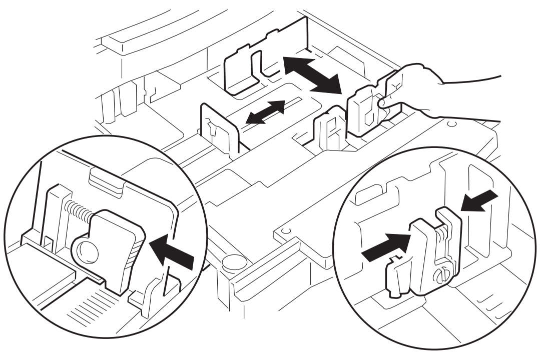
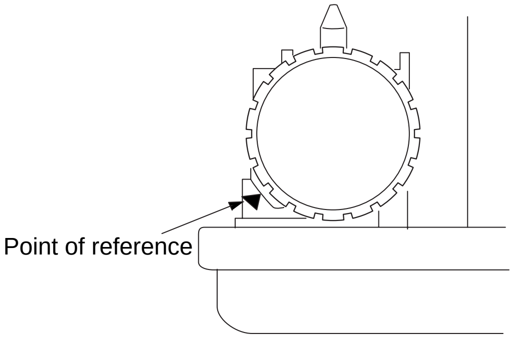
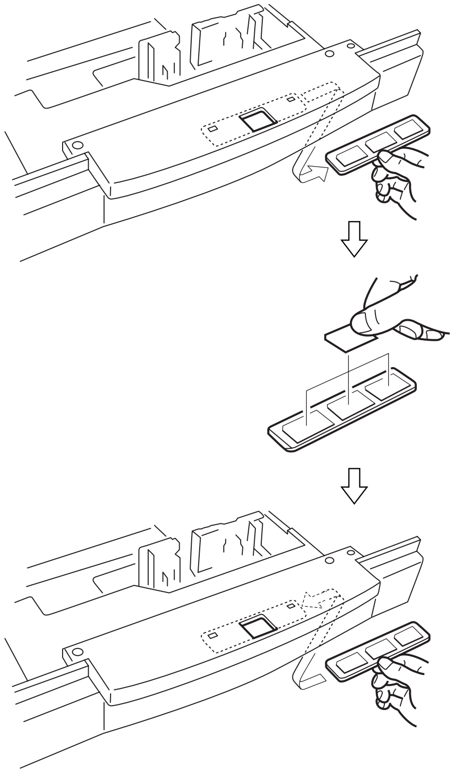
No.	Work	Remarks
1	Turn off the main power switch, and detach the door switch actuator from the copier.	
2	Turn the developing assembly locking lever as shown in the figure to release the developing assembly lever.	 Developing assembly locking lever Feeding assembly lever
3	Remove the dummy drum. 1) Remove the screw shown in the diagram. (You will be using the screw when setting the drum unit.) 2) Pull the dummy drum straight to the front to detach. You will not need the dummy drum. Dispose of it.	 Dummy drum Screw
4	Remove the separation static eliminator, and clean it with the special brush. Then, put it back by inserting it until a click is felt.	 Separation static eliminator

No.	Work	Remarks
5	Remove the dust-proofing glass, and clean it with lint-free paper. Then, put it back to its initial position.	 Dust-proofing glass
6	1) Unpack the drum unit. • To prevent damage, be sure to hold it at its middle when taking it out of its box. 2) Remove the two primary charging roller releasing rolls. • Do not touch the surface of the drum. • Keep the drum away from light as much as possible.	 Primary charging roller releasing roll (to be removed). Primary charging roller releasing roll (to be removed). Do not touch the drum surface.
7	Check to make sure that the developing assembly is unlocked; then, insert it carefully along the rails. • Avoid touching the surface of the drum.	 Rails Drum unit

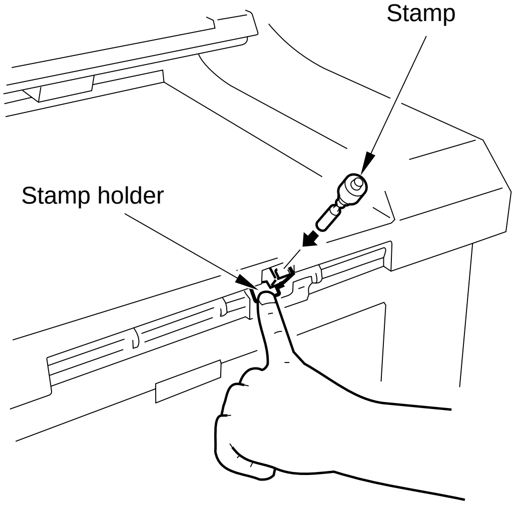
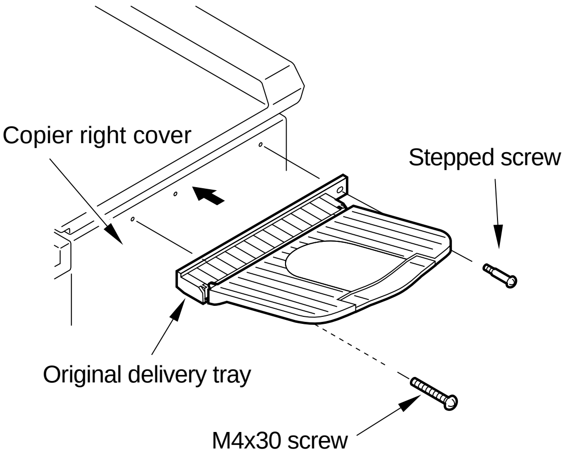
No.	Work	Remarks
8	Secure the drum unit in place using the screw used to keep the dummy drum in place.	 Drum unit Screw
9	Enter the date and the counter reading on the label, and attach it to the front cover of the drum unit.	 date date Datum counter compteur Zähler notes note Notiz
10	1) Lock the developing assembly in place by operating the developing assembly releasing lever. 2) Lock the feeding assembly in place.	 Developing assembly releasing lever Feeding assembly releasing lever

E. Setting the Cassette

No.	Work	Remarks
1	Slide out the cassette.	
2	Find out the type of paper used by the user, and set the cassette to A/B or Inch. (Set the switch on each cassette.)	
3	Attach the label to the paper size dial. (Be sure to fit the boss in the cut-off of the label.) **Caution:** The label comes in two types: A/B and Inch. Be sure to use the appropriate label.	

No.	Work	Remarks
4	Holding the lever of the width guide and then the length guide, slide them to the appropriate size index.	
5	Turn the paper size dial to suit the selected paper size.	
6	Attach the cassette size label (Figure) to indicate the selected paper size. • Do not use the A3 or 11x17 size label to the cassette M, which is not designed for these sizes.	
7	Put paper in the cassette.	

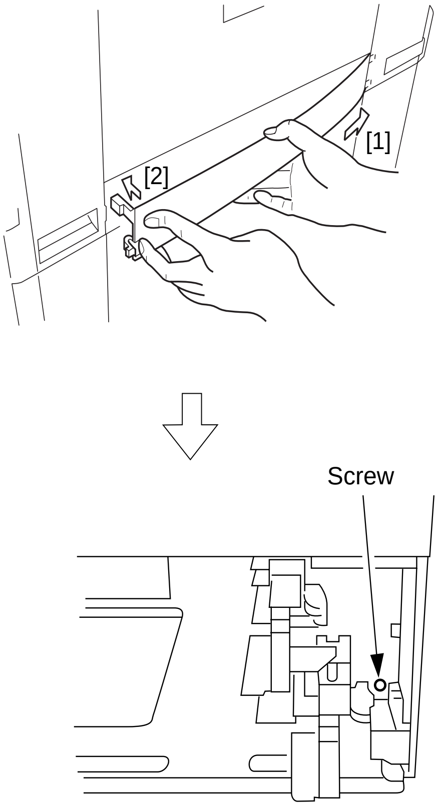
F. Installing the Feeder (DADF standard model only)

No.	Work	Remarks
1	Mount the stamp. Open the DADF stamp holder, and inert the stamp into the holder to mount. Do not touch the stamp face. Be sure to wash off any ink from your hands.	 Stamp Stamp holder
2	Mount the original delivery tray. 1) Mount the original delivery tray as shown in the figure using the stepped screw and M4x30 screw.	 Copier right cover Stepped screw Original delivery tray M4x30 screw

G. Making Settings

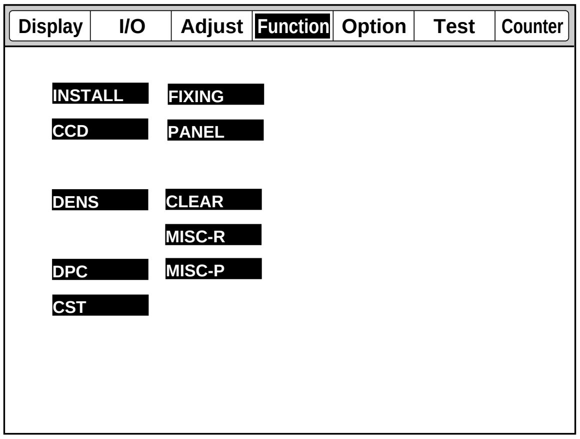
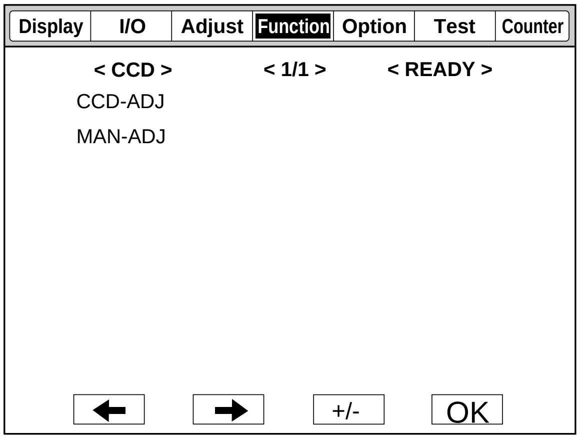
No.	Work	Remarks
1	Turn on the main power switch.	
2	Press the User Mode key, and use the following items: • Date • Time	user mode → timer setting → date setting
3	Start service mode.	⊛ → 2 and 8 at the same time → ⊛
4	Select the appropriate item according to the use's preference from among those under COPIER>OPTION>USER in service mode.	See VII-F. in Chapter 13.

H. Checking the Copy images

No.	Work	Remarks
1	If the machine is in service mode, press the Reset key twice to end it.	
2	• If you are installing the machine on a 4- or 2-cassette pedestal, skip the following steps. 1) Mount the lower right cover. 2) Slide out the top/bottom cassette, and secure the lower right cover with a screw.	
3	Using the NA-3 Test Chart as an original, make a copy to check images. To use photo mode as standard, select (ON) user mode → common settings → photo mode .	<Optimum Image> • In text mode, the background is free of fogging. • In text/photo mode, step edge No. 10 is somewhat visible, and the background is free of fogging. • The image margins are as specified: 2.5 ±1.5 mm
4	Clean up the area around the machine, and fill out the Service Book.	Be sure to store the Service Book in the case behind the front cover.

Perform the adjustments that follow if the copy images are faulty.

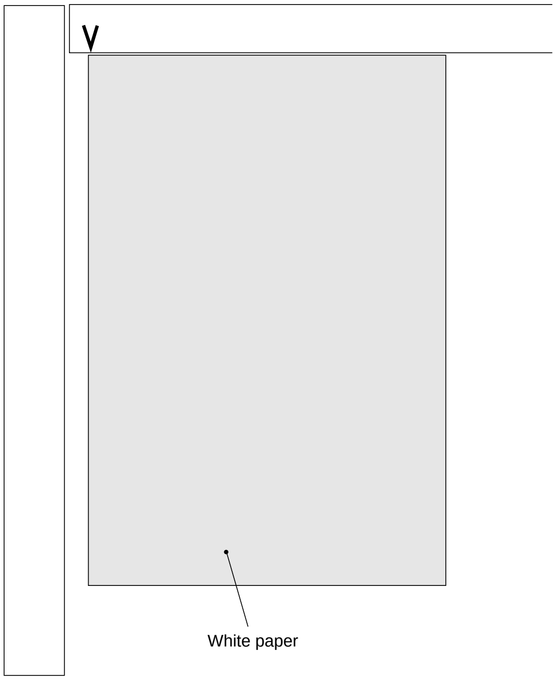
1. Shading Adjustment

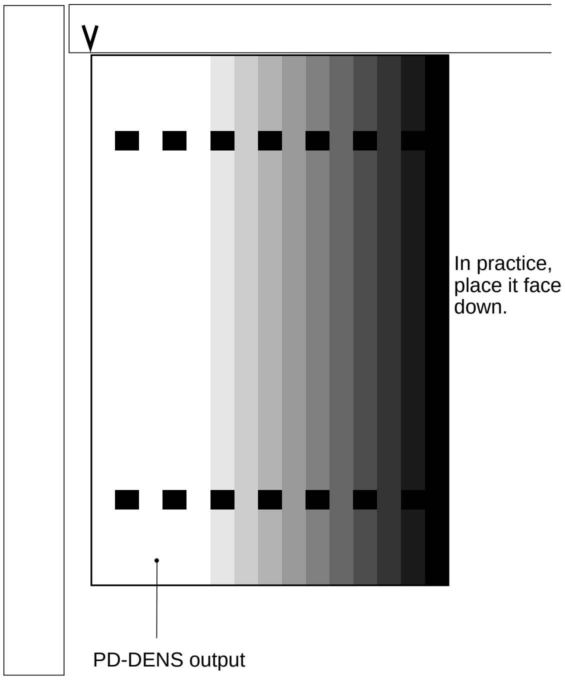
No.	Work	Remarks
1	Start service mode.	⊛ → 2 and 8 at the same time → ⊛
2	On the screen that has appeared, select <COPIER> and <FUNCTION> in sequence.	■ Initial Screen  Display I/O Adjust Function Option Test Counter INSTALL FIXING CCD PANEL DENS CLEAR MISC-R DPC MISC-P CST
3	Select <CCD> on the FUCNTION screen; then, select <CCD-ADJ>. During operation, <SERVICE> will appear in the upper right corner of the screen.	■ CCD Select Screen  Display I/O Adjust Function Option Test Counter < CCD > < 1/1 > < READY > CCD-ADJ MAN-ADJ ← → +/- OK
4	Press the OK key. • Shading will be executed. • If successful, the operation ends by displaying <END> in the status indicator.	

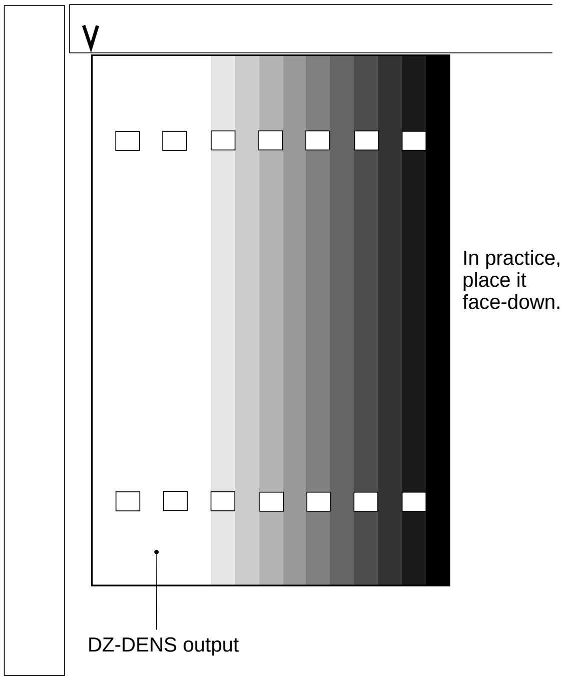
2. Auto Density Adjustment

Execute the following items of service mode (under FUNCTION) in sequence:

1) DENS>WHITE-ME to read a black sheet of paper.
2) DENS>PD-DENS to read a PD pattern.
3) DENS>PD-ME to read a PD pattern (OK or NG).
4) DENS>DZ-DENS to generate DZ (dither) pattern.
5) DENS>DZ-ME to read a DZ pattern (OK or NG).

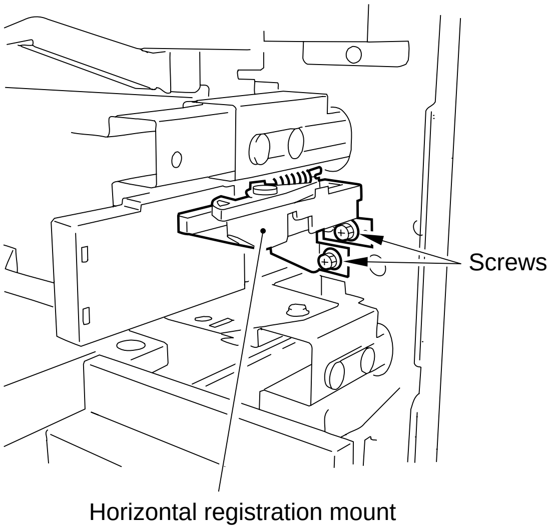
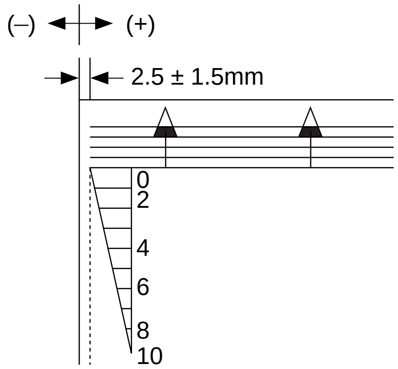
No.	Work	Remarks
1	Press the Reset key to end service mode.	
2	While holding the feeder or the copyboard cover at about 45°, make two A4 copies (solid black).	
3	Start service mode, and select COPEIR, FUNCTION, and DENS in order.	⊛ → 2 and 8 at the same time → ⊛
4	Place a white sheet of copy paper* A4 or larger on the copyboard glass as shown, and close the feeder or the copyboard cover.	* Must not be for color copiers. Select the whitest of all used by the user. 
5	Select WHITE-ME on the screen, and press the OK key. • The scanner makes a single scan.	

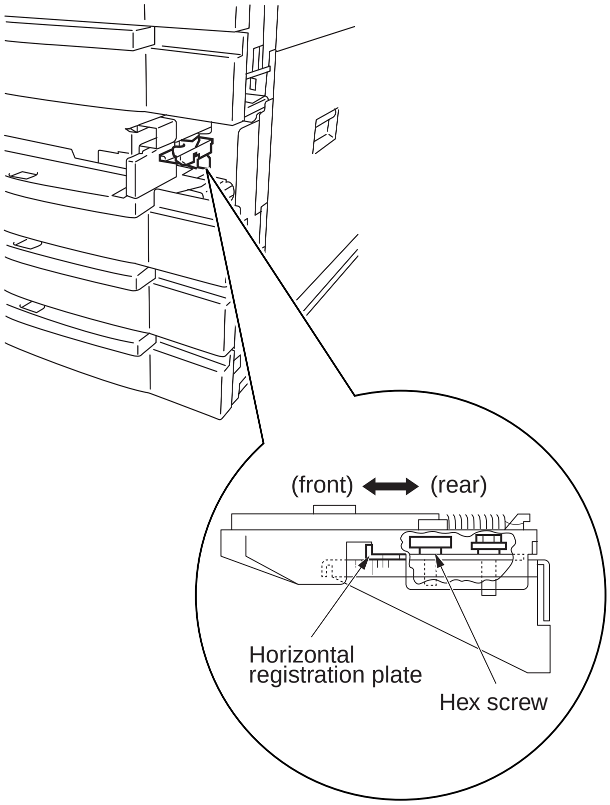
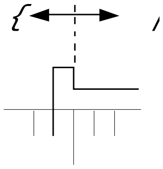
No.	Work	Remarks
6	Select PD-DENS, and press the Copy Start key. • A PD pattern will be generated.	Press the Copy Start key to execute. • The output will be used later for PD-ME. (Do not use it for DZ-ME.)
7	1) Place the PD-DENS output on the copyboard glass as shown. 2) Close the feeder or the copyboard glass. 3) Select PD-ME, and press the OK key. • The scanner makes 13 scans. • The notation "OK" will be indicated to the right of "PD-MDE" to end reading. • If the operation ended in NG, refer to the Service Manual. • Be sure to execute DZ auto density adjustment (DS-DENS, DZ-ME).	Caution: • Be sure to use the PD-DENS output for PD-ME reading. • Place the printed side down. • The white side must be the leading edge and black, the trailing edge. • Set the PD-DENS output against the V marking in the left rear of the copyboard glass. 

No.	Work	Remarks
8	Press the ⇨ key at the bottom of the Service Mode screen to go to its second page. Select DZ-DENS, and press the Copy Start key. • A DZ pattern will be generated.	Press the Copy Start key to execute. • Use the output for the next step (DZ-ME). (Do not use it for PD-ME.)
9	1) Place the DZ-DENS output on the copyboard glass as shown. 2) Close the feeder or the copyboard glass. 3) Select DZ-ME, and press the OK key. • The scanner makes 13 scans. • The notation OK will be indicated to the right of DZ-ME, and reading ends. • If the operation ended in NG, see the Service manual (II-B-3 in Chapter 13).	Caution: • To read DZ-ME, be sure to use the DZ-DENS output. (The DZ-DENS output has white patches.) • Place it so that its printed side faces down. • Place it so that its white side is the leading edge and black, the trailing edge. • Place the DZ-DENS output against the V marking in the rear left corner of the copyboard glass. 

No.	Work	Remarks
10	Press the Reset key to end service mode.	
11	1) Place the Test Chart (NA-3) on the copyboard glass, and check images made at the following settings: • In text mode, density at 5. • In text/photo mode, density at 5. • In photo mode, density at 5. 2) Check pick-up operation from the cassettes and the multifeeder.	<Optimum Image> • In text mode, the background is free of fogging. • In text/photo mode, step edge No. 10 is slightly visible, and the background is free of fogging. • In photo mode, the background is free of fogging.

3. Front/Rear Registration

No.	Work	Remarks
1	**Making Checks** a) Generate a PG solid black output, and adjust the printer settings by • Adjusting the horizontal registration mount. • Setting 6 to PG>TYPE for PG solid black. b) Set ADJUST>ADJ>XY> ADJ-Y in service mode: • To shift to the front, increase the setting. • To shift to the rear, decrease the setting. 1) Slide out the problem cassette. 2) Remove the two screws, and detach the horizontal registration mount.	 

No.	Work	Remarks
1	3) Loosen the hex screw, and move the horizontal registration plate to the rear and the to adjust.	 (front) (rear) Horizontal registration plate Hex screw **Caution:** When shifting the horizontal plate, try to match the inside of the L angle against a graduation of the scale. 
2	Multifeeder 1) Loosen the screw, and move the tray so that the registration is 2.5 ±1.5 mm in Direct.	

4. Registration Adjustment

No.	Work	Remarks
1	**Making Checks** a) Generate a PG solid black output, and adjust the printer settings by • Executing ADJUST>FEED-ADJ>REGIST. • Setting 6 to PG>TYPE for PG solid black. b) Set ADJUST>ADJ>XY>ADJ-X in service mode: • To decrease the margin, increase the setting. • To increase the margin, decrease the setting. 1) If it is not as indicated, select the problem cassette on the control panel. 2) Start service mode, and select ADJUST>FEED-ADJ>REGIST. 3) Adjust the margin.	

After completing the foregoing installation work, start installing the accessories (e.g., sorter):

■ Handling the Photosensitive Drum after Installation

The machine's photosensitive drum is highly susceptible to light, and exposure to room lighting is enough to cause white spots or black bands on copies.

Take note of the following:

- Try to finish jam removal work in 5 min.
- If you have to remove the drum unit from the copier for servicing work, wrap it in fresh copy paper, and place it in a dark place.
- Do not touch the surface of the photosensitive drum.
- If the surface of the photosensitive drum is soiled, wipe it with a flannel cloth coated with toner. (Do not use paper, lint-free or otherwise.)
- Do not dry wipe, or do not use solvent.

III. RELOCATING THE MACHINE

If the machine needs to be relocated after installation by truck or other means of transportation, perform the following:

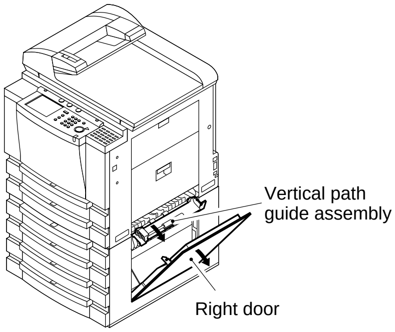
1. Points to Note

If the machine is moved while placed on the pedestal over a distance (e.g., from room to room), holding the machine by its grips can separate it from the pedestal. Avoid the grips, and be sure to lift the pedestal.

2. Preparing for Relocation

No.	Work	Remarks	Remarks
1	Take out the drum unit.	Put the drum unit in a separate box for transportation.	
2	Fix the scanner in place.		
3	Tape the charging assemblies and the feeding assembly levers in place to protect against vibration.		
4	Tape the front door, delivery assembly, and cassette in place.		
5	Place an A3 sheet of copy paper on the copyboard glass, and tape the copyboard cover (feeder) in place.		

3. Lifting the Copier Off the Pedestal

No.	Work	Remarks	Remarks
1	Open the right door of the pedestal, and release the guide plate used to connect the machine and the pedestal (by shifting it to the right).	 **Figure 12-301**	
2	Holding the grips of the machine (working in a group of two), lift the machine upright (so that it slips off the pin of the pedestal).		
3	Place the machine on the floor or a desk carefully.		

IV. INSTALLING THE CONTROL CARD V

- Before turning off the main power switch, check to make sure that the image/memory lamp is off.

1. Removing the Control Panel

1) Remove the following to detach the inside cover:
   - Front cover
   - Feeding assembly lever (after releasing the feeding assembly)
   - Drum unit (after releasing the developing assembly)
   - Registration roller tab
   - Top cassette
2) Lock the developing assembly, and remove the five screws; then, detach the inside cover.
3) Free the harness of the shortage connector from the edge saddle, and disconnect the shorting connector. (The shorting connector will not be used.)

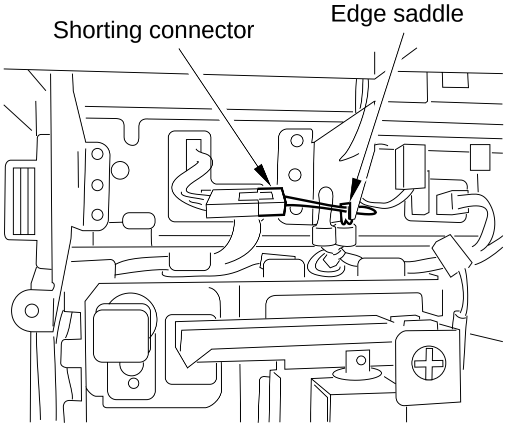


Figure 12-401

4) Remove the control panel, and turn it over carefully.
   - 4 screws
   - Grounding plat (1 pc.; 1 screw)
   - Connectors (4 pc.)

2. Preparing for the Control Card

1) Remove the inlet face plate.

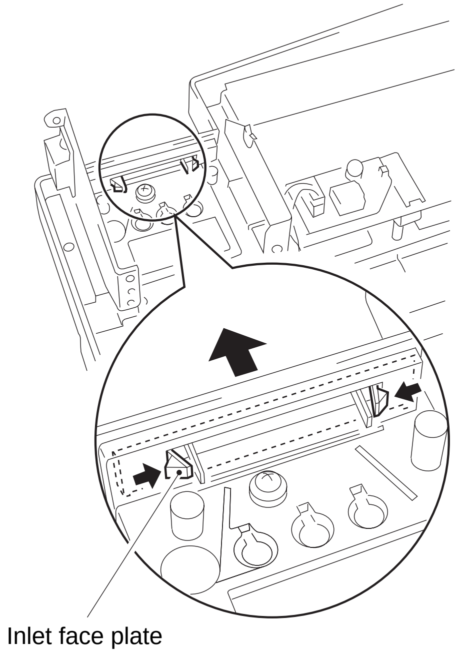


Figure 12-402

2) Remove the screw of the face plate.

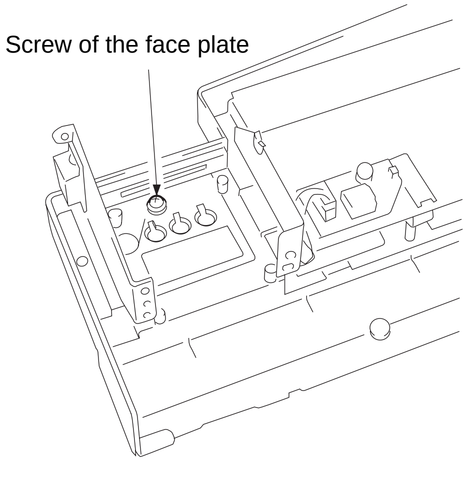


Figure 12-403

3) Remove the tie-wrap from the back of the face plate. (The tie-wrap will be used later.)

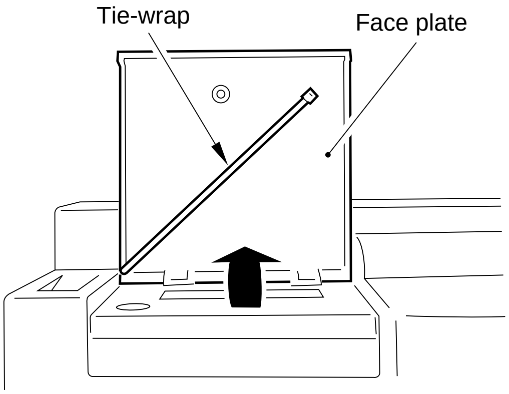

Tie-wrap
Face plate

Figure 12-404

4) Peel off the protective sheet from the display of the Control Card V.

3. Installing the Control Card

1) Secure the control card to the control panel with four screws.
   At this time, fit the harness of the 4-pin connector and the blue grounding wire in the tie-wrap removed in the foregoing step. (Be sure to arrange as shown.)

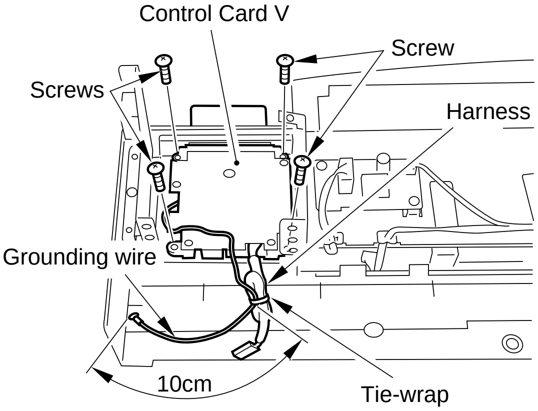

Control Card V
Screw
Screws
Harness
Grounding wire
10cm
Tie-wrap

Figure 12-405

Caution:
When securing the control card in place, be sure to position it so that a cad may be slid in and out smoothly.

Caution:
Be sure to center the connector for the printer over the opening.

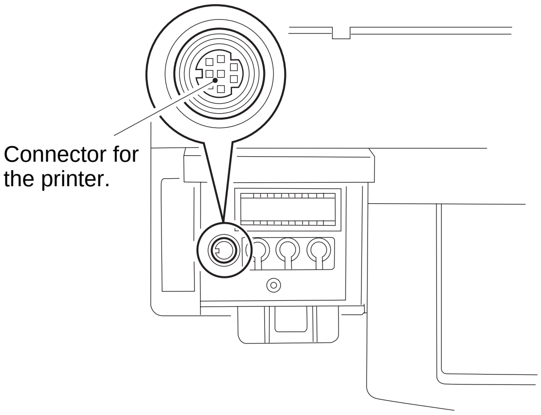

Connector for the printer.

Figure 12-406

2) Mount the control panel to the copier. Of the mounting screws used, tighten the farthest left screw on the grounding wire as shown in Figure 12-407.
   - Connector (4 pc.)
   - Grounding wire (M4 screw that comes with the unit)
   - Screw (4 pc.)

3) Connect the harness of the control card with the connector from which the shorting connector was removed in the foregoing step.

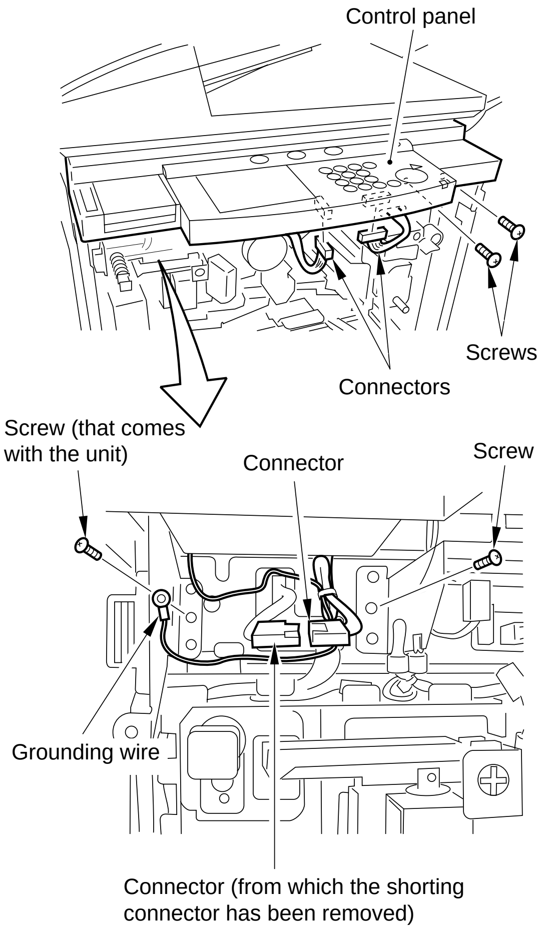

Control panel
Screws
Connectors
Screw (that comes with the unit)
Connector
Screw
Grounding wire
Connector (from which the shorting connector has been removed)

Figure 12-407

> **Caution:**
> Check to make sure that the grounding wire of the control card and the harness will not come into contact with the drive assemblies.
> If they are in contact, arrange them once again by re-routing.

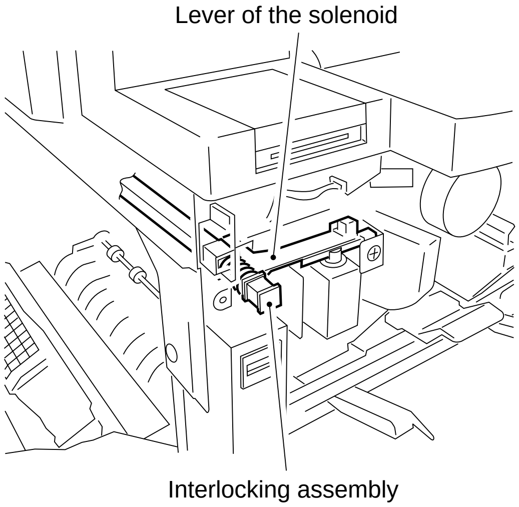

Lever of the solenoid
Interlocking assembly

Figure 12-408

4) Place the plastic film sheet over the opening in the control panel (display opening).

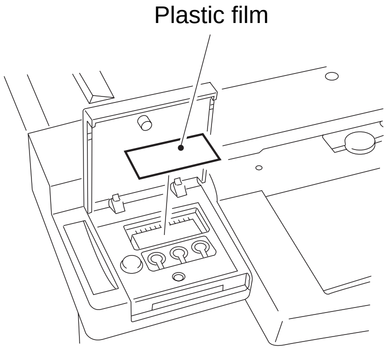

Plastic film

Figure 12-409

5) Peel the protective sheet from the control panel label of the control card.
6) Attach the control panel nameplate to the copier's control panel.

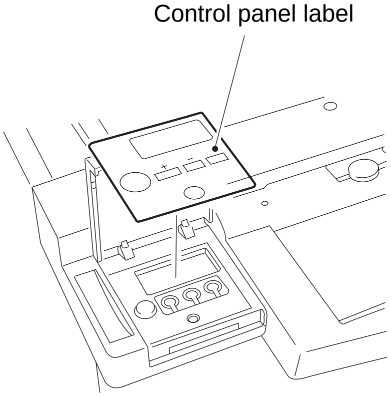


Figure 12-410

11) Attach the memo sheet and the transparent sheet.
12) Turn on the copier's main power switch, and check to make sure that the control card operates normally.

V. INSTALLING THE COPY DATA CONTROLLER-A1

1 Setting the Board

A. Copy Data Controller-A1

1) Remove the two screws [2], and detach the upper over [1].

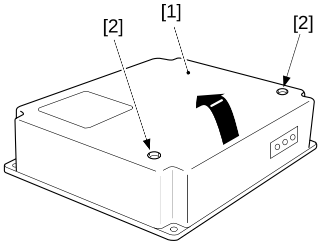


Figure 12-501

2) Set the DIP switches (SW1, SW5) to suit the needs of the user.

2-1) Shift bit 4 of the DIP switch (SW1-4) to match the copier model.

2-2) If group control is planned, shift bit 2 of the DIP switch (SW5-2).
To control AB-configuration paper, (A3, A4, B4, B5), keep it to OFF.
To control Inch-configuration paper (11x17, LTR, LGL, STMT), keep it to ON.

Switch	bit	Position	Description	Remarks
SW1	1 to 3	OFF	For normal operation.	
	4	ON	For IPC communication.	CL700/800, NP6750, NP6016, GP Series
		OFF	For serial communication.	NP6030, NP6060, NP8530, NP9800
	5	ON	If a central control device is used.	Requires an Interface Board-B1.
		OFF	For normal operation, or for remote control using a commercially available modem.	Remote control using a commercially available modem requires a modem and an Interface Board-B1.
	6	ON	For RAM initialization.	
		OFF	For normal operation.	
SW5	1	ON	For factory adjustment.	
		OFF	For normal operation.	
	2	ON	For control of Inch-configuration (11x17, LTR, LGL, STMT).	For other paper types, use service mode under 10) of 5. "Checking the Operation."
		OFF	For control of AB-configuration (A3, A4, B4, B5).	
	3	ON	For service mode.	
		OFF	For normal operation.	
	4	ON	If group control is planned.	See Note.
		OFF	If group control is not planned.	
	5, 6	OFF	Not used.	

Note: If the Control Card V is used or remote control by the Copy Data Controller-A1 is used*, keep bit 4 of the DIP switch (SW5-4) to OFF.

* If group control functions other than the following are not used: ID input, control by paper size, control by toner color, control by copy mode, control by paper type.

2-3) If group control is not planned, keep bit 4 of the DIP switch (SW5-4) to OFF.
If you are connecting the Interface Board-B1, Communication Control Boar-A1, or Interface Board-A1, see "Setting the Board" in its respective Installation Procedure.

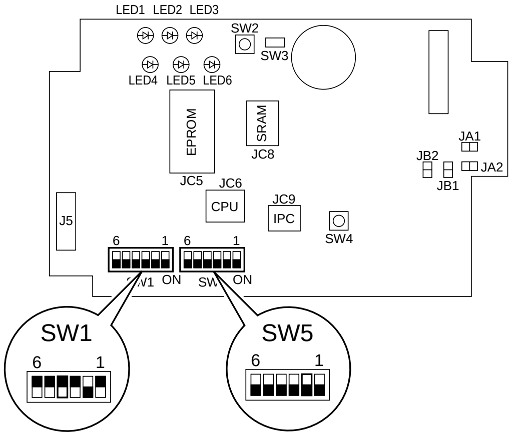

LED1 LED2 LED3
SW2
SW3
LED4 LED5 LED6
EPROM
SRAM
JC8
JA1
JB2
JA2
JB1
JC5
JC6
CPU
JC9
IPC
J5
SW4
6
1
6
1
SW1 ON
SW5 ON
SW1
6
1
SW5
6
1

Figure 12-502

3) Set the jumper connectors (JA1, JA2, JB1, JB2) on the copy data control to suit the needs of the user.

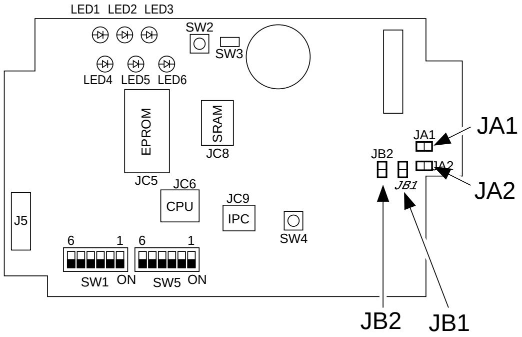

LED1 LED2 LED3
SW2
SW3
LED4 LED5 LED6
EPROM
SRAM
JC8
JA1
JB2
JA2
JB1
JC5
JC6
CPU
JC9
IPC
J5
SW4
6
1
6
1
SW1 ON
SW5 ON
JA1
JA2
JB2
JB1

Figure 12-503

A: Connecting the Communication Control Board-A1 or the interface Board-B1 (Power Supply-A1 needed)

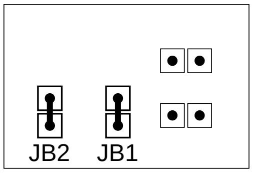


Figure 12-504

B: To not connect the Communication Control Board-A1 or the Interface Board-B1 (does not require Power Supply-A1):

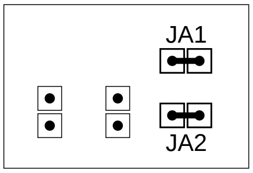


Figure 12-505

2 Installing to the Copier

Be sure to keep the following in mind when installing the Copy Data Controller-A1 to the copier:

1. See to it that the work complies with the regulations of the country of installation.
2. Install the copier in advance.
3. Disconnect the copier's power plug.
4. Identify the screws by type (length, diameter) and location.
5. Prepare settings data on a computer at the service station (for remote control only).

1) Remove the four screws [2], and detach the face plate [1]of the copier's rear cover.

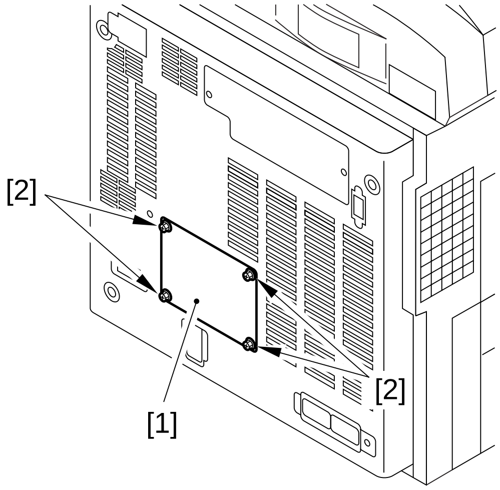


Figure 12-506

2) Remove the rear cover.
3) Cut the red tie-wrap [3], and move the 8P connector [4] and the 9P connector [5] to the left.

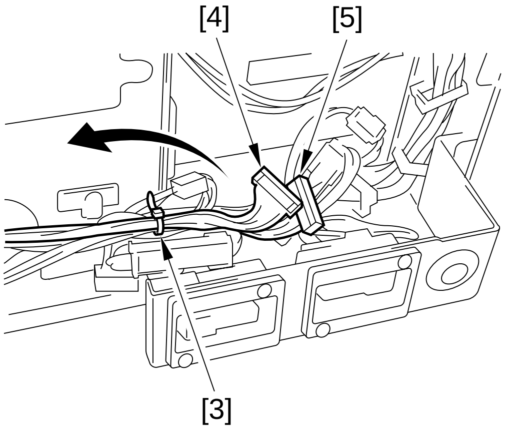


Figure 12-507

4) Mount the rear cover.
5) If you are installing a Card Reader-A1, connect the 9P cable for the card reader to J4 of the copy data controller.

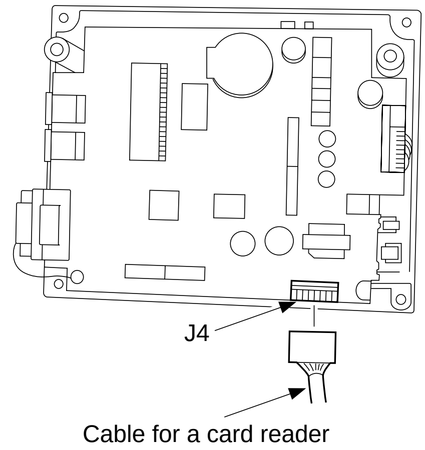


Figure 12-508-1

6) Connect the 8P connector [8] to the copier's 8P connector [9].

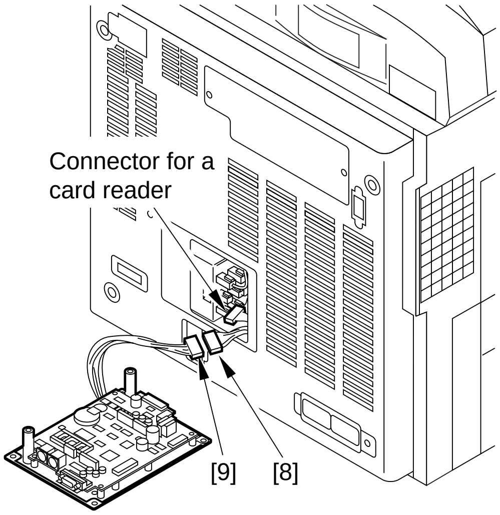

Connector for a card reader
[9]
[8]

Figure 12-508-2

7) Secure the copy data controller [10] in place to the copier's rear cover with four screws [11].

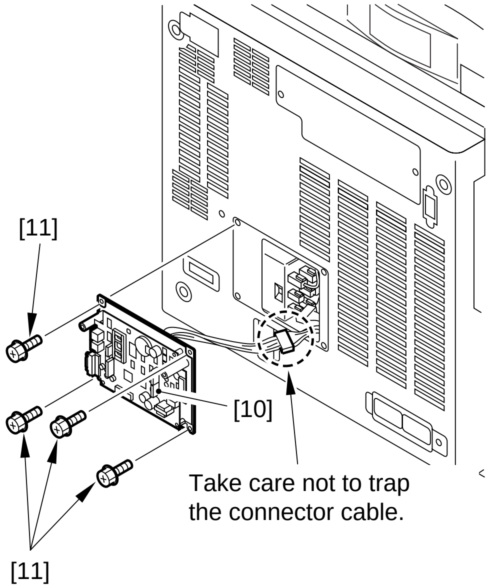

[11]
[10]
Take care not to trap the connector cable.
[11]

Figure 12-508-3

3 Checking the Operation

1) Connect the connector [1] of the Power Supply-A1 to the connector [2] of the copy data controller correctly as shown. Check to make sure that the cord is in the groove of the board.

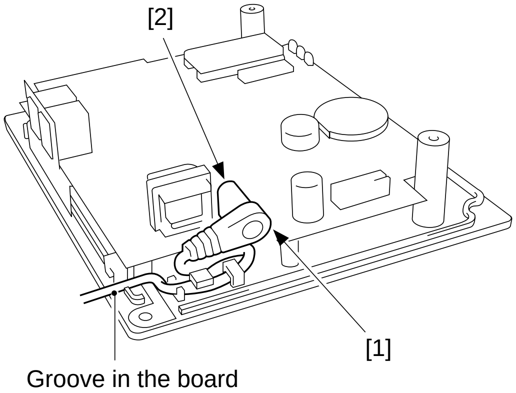

[2]
[1]
Groove in the board

Figure 12-509

2) Connect the Power Supply-A1 to the power plug, and check to make sure that LED1 of the copy data controller turns on.

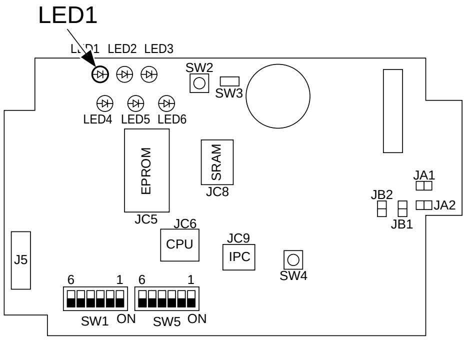

LED1
LED2
LED3
SW2
SW3
LED4
LED5
LED6
EPROM
SRAM
JC8
JC5
JC6
CPU
JC9
IPC
JA1
JB2
JA2
JB1
J5
SW4
6 1 6 1
SW1 ON
SW5 ON

Figure 12-510

3) Turn on the copier's main switch, and check to make sure that LED2 of the copy data controller flashes. Make one copy to make sure that LED3 flashes during the copying run.

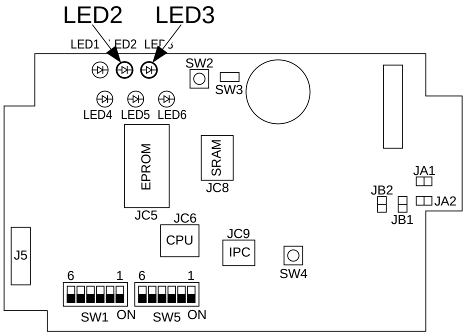

LED2
LED3
LED1
SW2
SW3
LED4
LED5
LED6
EPROM
SRAM
JC8
JC5
JC6
CPU
JC9
IPC
JA1
JB2
JA2
JB1
J5
SW4
6 1 6 1
SW1 ON
SW5 ON

Figure 12-511

4) If you are connecting a Communication Control board-A1 or an Interface Board-B1 (i.e., requiring a Power Supply-A1), go to step 5). Turn on the copier's main switch, and check to make sure that LED 1 of the copy data controller turns on and LED2 flashes. Make one copy to make sure that LED3 flashes during the copying run.

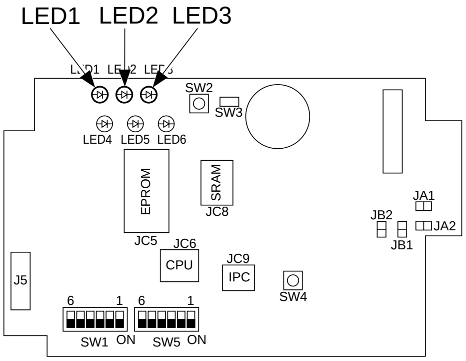

LED1
LED2
LED3
SW2
SW3
LED4
LED5
LED6
EPROM
SRAM
JC8
JC5
JC6
CPU
JC9
IPC
JA1
JB2
JA2
JB1
J5
SW4
6 1 6 1
SW1 ON
SW5 ON

Figure 12-512

5) If group control is not planned, go to step 11). If group control is planned, set the method of input, mode of control, and paper size to suit the needs of the user. Shift 3 of the DIP switch (SW5-3) of the copy data controller to ON.

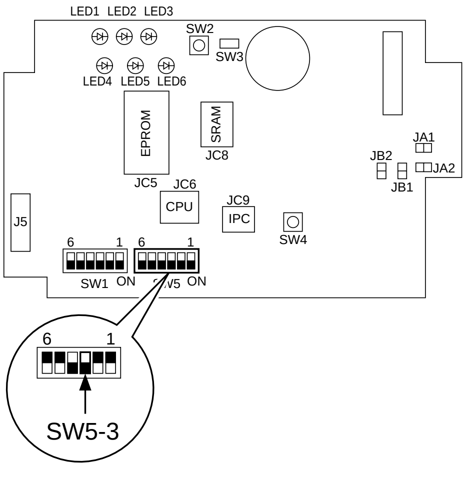

LED1 LED2 LED3
SW2
SW3
LED4 LED5 LED6
EPROM
SRAM
JC8
JC5
JC6
CPU
JC9
IPC
SW4
JA1
JB2
JA2
JB1
J5
6
1
6
1
SW1
ON
SW5
ON
6
1
SW5-3

Figure 12-513

6) Connect the connector [3] of the Keypad-A1 to the connector J3 [4] of the copy data controller.

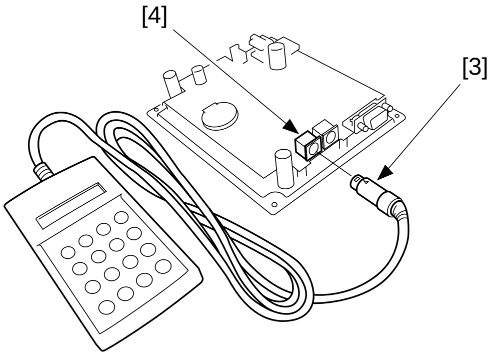


Figure 12-514

7) Press the switch (SW2) on the copy data controller to start service mode.

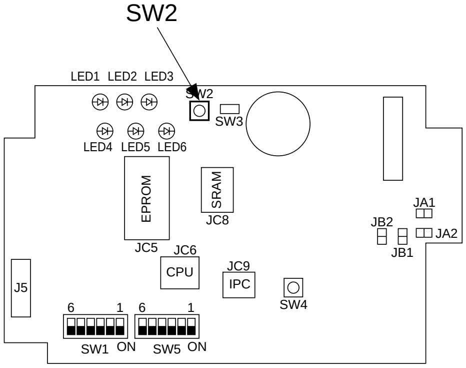

SW2
LED1 LED2 LED3
SW2
SW3
LED4 LED5 LED6
EPROM
SRAM
JC8
JC5
JC6
CPU
JC9
IPC
SW4
JA1
JB2
JA2
JB1
J5
6
1
6
1
SW1
ON
SW5
ON

Figure 12-515

8) Set the method of input.

8-1) Set the card/ID input using the Keypad-A1. (Initially, card input is selected.)

8-2) To change from card input to ID input, perform the following:
To change from ID input t card input (requires a Card Reader-1), go to 8-4).

MANAGE=CARD will be indicated.

8-3) Press the 2 key, and press the ENT key.

MANAGE=ID will be indicated.

8-4) To change to card input,

When MANAGE=ID is indicated, press

the 1 key and then the ENT key.

MANAGE=CARD will be indicated.

Code	Input
1	Card
2	ID No.

Table 11-502

Caution:

1. If bit 4 of the DIP switch (SW5-4) of the copy data controller is set to OFF, group control is disabled and the indication will be as follows:

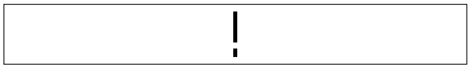


Figure 12-516

2. If the copier already has a list of IDs in its memory, they may be shared by the copy data controller; perform the following:

- Copying the IDs

a) Set the bits of the DIP switch (SW1) of the copy data controller as follows:

	bit	Position
SW1	1, 2	ON
	3	OFF

Table 12-503

b) Press the switch SW4 of the copy data controller.
LED5 should turn on instantaneously in response to a press on the switch.

c) LED5 turns on to indicate the end of data copying.
LED5 flashes if copying of data fails. Press the switch SW4 once again, and see if LED5 turns on.
The copier cannot deliver paper during copying operation.

d) Set the bits of the DIP switch SW1 of the copy data controller as follows.
LED5 should turn off.

	bit	Position
SW1	1, 2, 3	OFF

Table 12-504

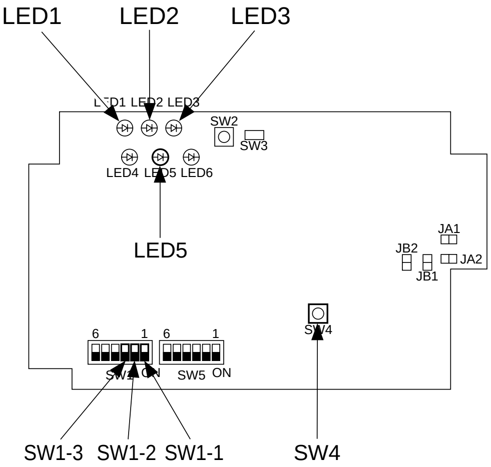


Figure 12-517

9) Set the mode of control.

9-1) Set the mode of control using the Keypad-A1.
Press ▽ / △ until FORMAT=1 is indicated.

9-2) Enter the appropriate number for mode of control to suit the copier model and the preference of the user. (Initially, it is set to 1.)

No.	Number of groups	Paper size	Mode
1	3000	5	—
2	1000	5	Single-/double-sided
3	1000	5	Mono, 2-color/ Full-color

Table 12-505

9-3) For instance, to set the mode of control to 3,

1. When FORMAT=1 (default) is indicated, Press the 3 key.
(If you have made a mistake, press the C key to clear. Or, you may press the ESC key to stop the work.)
2. When FORMAT=3 is indicated, press the ESC key.
3. FORMAT=3 remains while formatting takes place. The cursor keeps flashing during formatting. The mode is set to 3 when it stops flashing.

Caution:
When a new mode of control has been set, such items as unit price, upper limit, counter reading, and ID Nos. are all initialized. Set them as needed.

10) Set the control paper size.

10-1) Change the control panel size using the DIP switch on the copy data controller and the Keypad-A1. To use the current setting, go to step 11).

10-2) Press the ▽ / △ key to scan through the paper sizes. (Size 5 OTH will not be indicated, as it cannot be changed.)

EX 1:

1. SIZE1=A3 is indicated.
2. Press the ▽ key.
3. SIZE2=A4 is indicated.
4. Press the ▽ key.
5. SIZE3=B4 is indicated.
6. Press the ▽ key.
7. SIZE4=B5 is indicated.
8. Press the △ key.
9. SIZE3=B4 is indicated.
10. Press the △ key.
11. SIZE2=A4 is indicated.

EX 2: To change control size 3 B4 to LGL,

1. Press the ▽ / △ key to indicate SIZE3=B4 .
2. Find the LGL size from the conversion code table (Table 5-506); press [1] and [3].
3. SIZE3=13 is indicated.
4. Press the ENT key.
5. SIZE3=LGL is displayed to indicate the change.

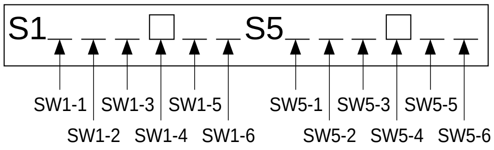
Caution:
1. For SIZEs 1 through 4, no single size may be set more than once.
2. The counter reading will remain the same after the change.

10-3) Conversion Codes

Size	Code	Size	Code
B5	1	Postcard (Jpn)	25
FOOLS	2	U LARGE 2	26
A4	3	GLTR	27
B4	5	10 x 8	28
A3	7	GLGL	29
U SMALL (US)	8	KLGL	33
STMT	9	OFFICIO	35
U LARGE (UL)	10	EOFFICIO	36
LTR	11	AOFFICIO	37
LGL	13	BOFFICIO	38
LDR (11 x 7)	15	ALT R	39
A5	17	ALGL	41
AFOOLS	18	12 x 18	48
A6	19	B3	49
FOLIO	21	A2	50
COMPUTER	23	17 x 22	51
U SMALL 2	24	18 x 24	52

Table 12-506

11) Check the DIP switch settings.
11-1) Shift bit 3 of the DIP switch (SW5-3) on the copy data controller to OFF.
11-2) Press the ▽ / △ key to indicate the DIP switch (SW1/SW5) settings.


S1
S5
SW1-1
SW1-3
SW1-5
SW5-1
SW5-3
SW5-5
SW1-2
SW1-4
SW1-6
SW5-2
SW5-4
SW5-6

☐ : The bit is at ON.
__ : The bit is at OFF.

Figure 12-518

11-3) Check the DIP switch (SW1/SW5) settings of the copy data controller. (See Table 3-1.)
If the setting is not correct, go back to "Setting the Board," and repeat the steps.
If you are setting the Interface Board-B1, Interface Board-A1, or Communications Board-A1 as an option, see its respective Installation Processor.
11-4) Press the switch SW2.

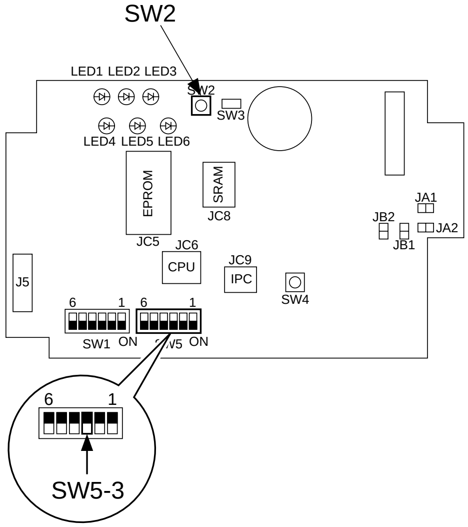

SW2
LED1 LED2 LED3
SW2
SW3
LED4 LED5 LED6
EPROM
JC5
SRAM
JC8
JA1
JB2
JA2
JB1
JC6
CPU
JC9
IPC
SW4
J5
6
1
6
1
SW1 ON
SW5 ON
6
1
SW5-3

Figure 12-519

11-5) Check to make sure that the display of the Keypad-A1 is as follows; then, disconnect the keypad.

```
—   —   —   —   —
```

Figure 12-520

1) Attach the switch settings label [6] to the upper cover [5]. (Be sure to fill out the label with the switch settings.)

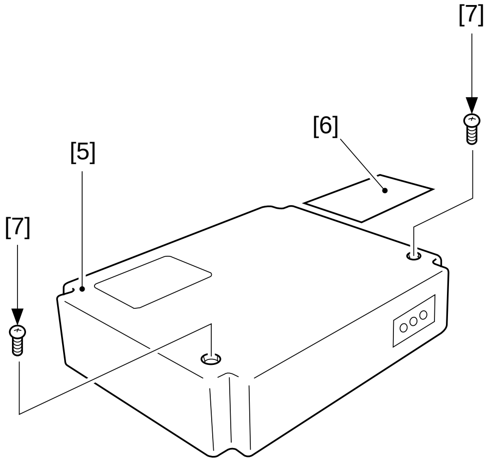


Figure 12-521

13) Secure the upper cover with two screws [7]. (At this time, check to make sure that the cable of the power supply unit is secured in place to the cable guide and is not trapped by the upper cover.)
14) If you are connecting the Control Card Printer A-1, connect it to the connector J4 of the copy data controller. (As necessary, use a relay cable.)

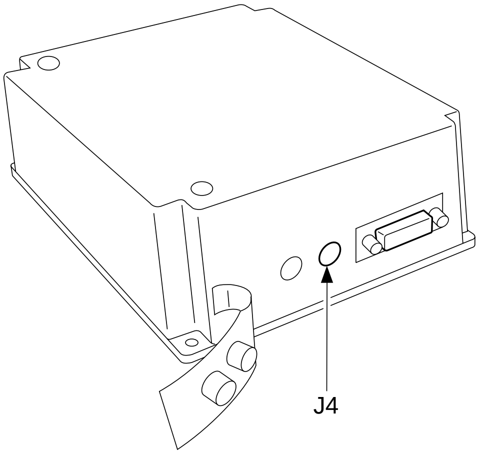


Figure 12-522

15) If no portion of a cable is showing outside the copy data controller, end the installation work.
Attach the petty-pull [8] to the lower right corner of the copier's back.

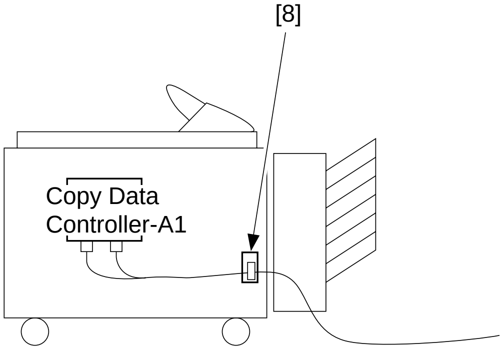


Figure 12-523

16) Secure the cable connected to the copy data controller using the petty-pull.
17) Check to make sure that the cables and wires are not trapped by the copier's or the sorter's casters.

VI. INSTALLATION OF THE NE CONTROLLER-A1

1 Installing to the Copier

Be sure to keep the following in mind when installing the NE Controller-A1 to the copier:

1. See to it that the work complies with the regulations of the country of installation.
2. Install the copier in advance.
3. Disconnect the copier's power plug.
4. Identify the screws by type (length, diameter) and location.
5. Prepare settings data on a computer at the service station.

1) Remove the two screws [2], and remove the upper cover.

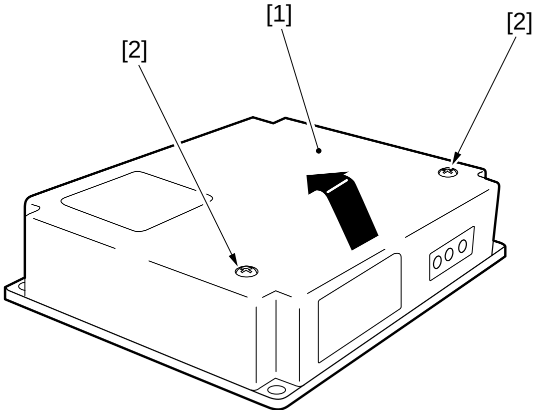


Figure 12-601

2) Connect the connector [3] of the power supply unit to the connector [4].

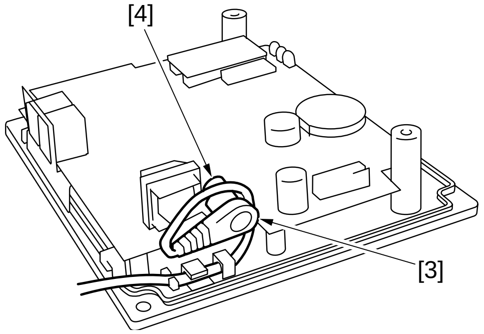


Figure 12-602

3) Remove the four screws [6], and detach the face plate [5] of the copier's rear cover.

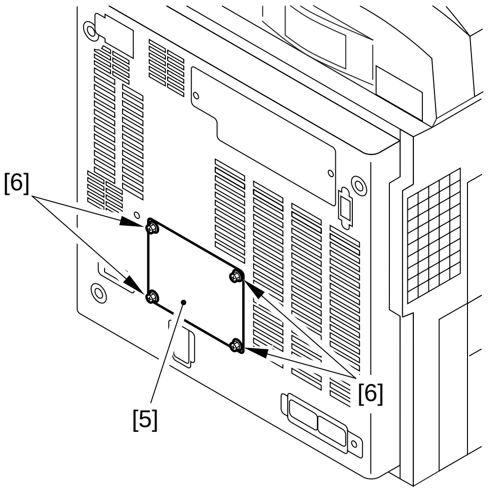


Figure 12-603

4) Remove the rear cover.
5) Cut the red tie-wrap [7], and move the 8P connector [8] and the 9P connector [9] to the left.

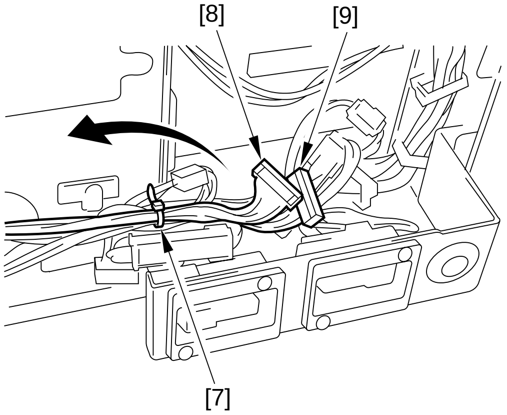


Figure 12-604

6) Mount the rear cover.
7) Connect the 8P connector [10] of the controller and the copier's 8P connector [11].

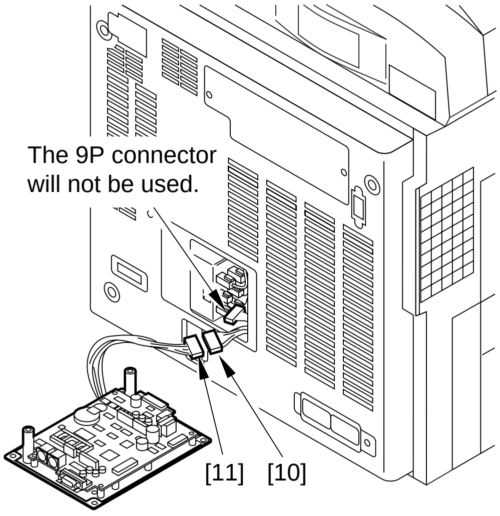

The 9P connector will not be used.
[11]
[10]

Figure 12-605

8) Secure the controller [12] to the copier's rear cover with for screws [13] (that comes with the controller).

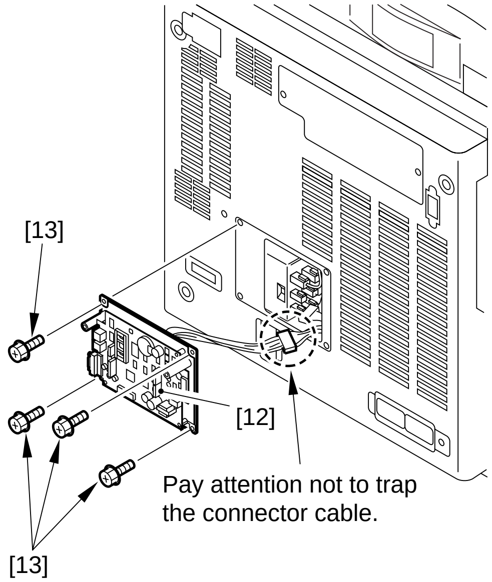

[13]
[12]
Pay attention not to trap the connector cable.
[13]

Figure 12-606

9) Remove the slack from the cable between the copier an the controller; keep the extra lengths on the controller by securing them with a harness band [14].

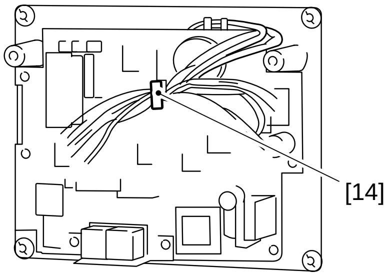


Figure 12-607

10) Shift the bit of the DIP switch (SW2-4) [15] on the board of the controller to ON (to select IPC mode for communication between copier and controller).

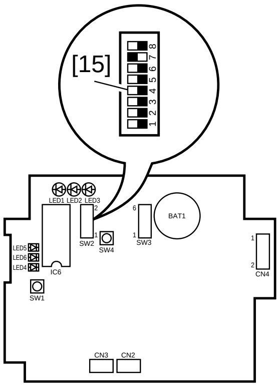

[15]
1 2 3 4 5 6 7 8
LED1 LED2 LED3
SW2
SW4
SW3
BAT1
LED5
LED6
LED4
IC6
SW1
CN4
CN3 CN2

Figure 12-608

11) If IC6 [16] is mounted on the board of the controller, shift bit 7 of the DIP switch (SW2-7) [17] to ON; otherwise, shift it to OFF.

Note 1: If IC6 [16] is not mounted, you need not mount it newly.

Note 2: If you are mounting a ROM (IC6) [16] for upgrading or replacement, be sure to set bit 7 of the DIP switch (SW2-7) [17] to ON.

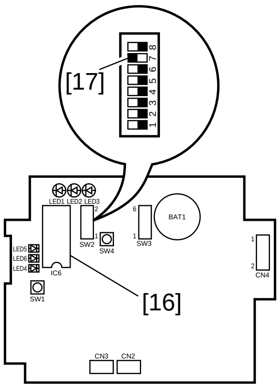

[17]
1 2 3 4 5 6 7 8
LED1 LED2 LED3
SW2
SW4
SW3
BAT1
LED5
LED6
LED4
IC6
SW1
[16]
CN4
CN3 CN2

Figure 12-609

12) Se each bit of the DI switch (SW3) [18] on the board of the controller as shown.

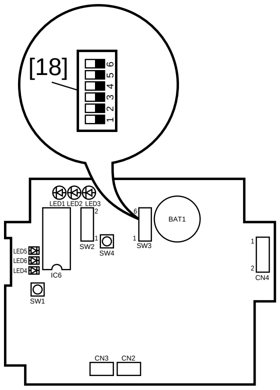

[18]
1 2 3 4 5 6
LED1 LED2 LED3
SW2
SW4
SW3
BAT1
LED5
LED6
LED4
IC6
SW1
CN4
CN3 CN2

Figure 12-610

<table>
<tr><th>Switch</th><th>Settings</th><th>Description</th></tr>
<tr><td>SW3-1
SW3-2</td><td>See right.</td><td>
<table>
<tr><th>SW3-1</th><th>SW3-2</th><th>Function</th></tr>
<tr><td>OFF</td><td>OFF</td><td>Set the modem signal transmission level to -16 dBm.</td></tr>
<tr><td>ON</td><td>OFF</td><td>Sets the modem signal transmission level to -14 dBm.</td></tr>
<tr><td>OFF</td><td>ON</td><td>Sets the modem signal transmission level to -12 dBm.</td></tr>
<tr><td>ON</td><td>ON</td><td>Sets the modem signal transmission level to -10 dBm.</td></tr>
</table>
</td></tr>
<tr><td>SW3-3</td><td>OFF</td><td>Keep it to OFF at all times.</td></tr>
<tr><td rowspan="2">SW3-4</td><td>ON</td><td>Sets the line setting to push pulse.</td></tr>
<tr><td>OFF</td><td>Set she line setting to dial pulse.</td></tr>
<tr><td rowspan="2">SW3-5</td><td>ON</td><td>Sets the dial pulse speed to 20 pps.</td></tr>
<tr><td>OFF</td><td>Sets the dial pulse speed to 10 pps.</td></tr>
<tr><td>SW3-6</td><td>–</td><td>Not used.</td></tr>
</table>

Table 12-601

13) Connect the power supply unit to the power plug, and check to make sure that LED1 [19] (green) of the board of the controller turns on.

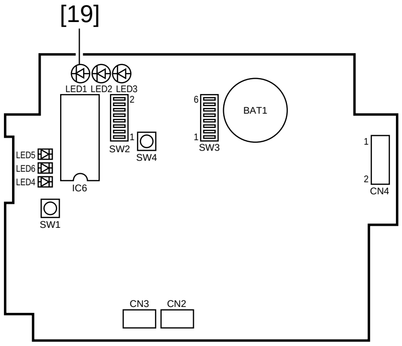


Figure 12-611

14) Initialize the RAM of the controller.
Set the bits of the DIP switch (SW2) [20] as shown, and press the push switch (SW4) [21]. LED5 [22] (red) will turn on in response to a press.

SW2 bits	Settings
SW2-1	OFF
SW2-2	OFF
SW2-3	ON
SW2-4	ON
SW2-5	OFF
SW2-6	OFF
SW2-7	See step 9).
SW2-8	OFF

Table 12-602

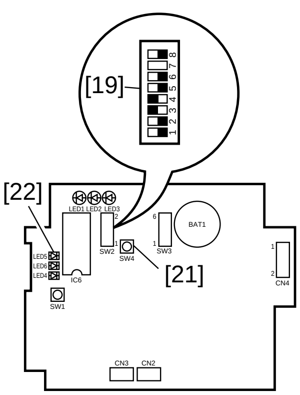

[19]
1 2 3 4 5 6 7 8
[22]
LED1 LED2 LED3
SW2
SW4
SW3
BAT1
LED5
LED6
LED4
IC6
SW1
[21]
CN4
CN3
CN2

Figure 12-612

15) If LED5 [22] (red) has turned on, set the bits of the DIP switch (SW2) [20] on the board of the controller as shown, and press the push switch (SW4) [21].
A press on the push switch (SW4) [21] will turn off LED5 [22] (red), indicating that the RAM has been initialized.

SW2 bits	Settings
SW2-1	OFF
SW2-2	OFF
SW2-3	OFF
SW2-4	ON
SW2-5	OFF
SW2-6	ON
SW2-7	See step 9).
SW2-8	OFF

Table 12-603

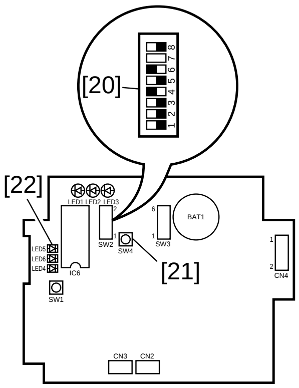

[20]
1 2 3 4 5 6 7 8
[22]
LED1 LED2 LED3
SW2
SW4
SW3
BAT1
LED5
LED6
LED4
IC6
SW1
[21]
CN4
CN3
CN2

Figure 12-613

16) Shift the bit of the DIP switch (SW2-6) [23] on the board of the controller to OFF.

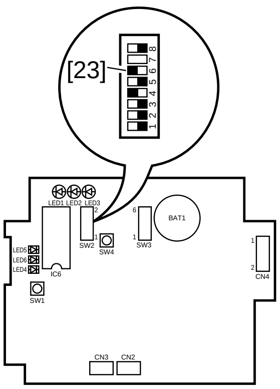

[23]
1 2 3 4 5 6 7 8
LED1 LED2 LED3
SW2
SW4
SW3
BAT1
LED5
LED6
LED4
IC6
SW1
CN4
CN3
CN2

Figure 12-614

17) Connect the telephone line to the controller. If the connection is only to the controller, connect the modular jack cable to its connector LINE [24].
If the extension function of the controller is to be used, connect the existing telephone or a fax to its connector TEL [25], and connect the telephone line to its connector LINE [24].

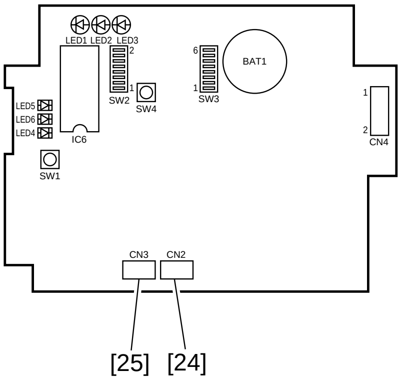

LED1 LED2 LED3
2
6
BAT1
1
SW2
SW4
1
SW3
LED5
LED6
LED4
IC6
1
2
CN4
SW1
CN3
CN2
[25]
[24]

Figure 12-615

18) Place a call to the service station to ask for initial settings for the controller. (LED4 [26] (red) will flash.)

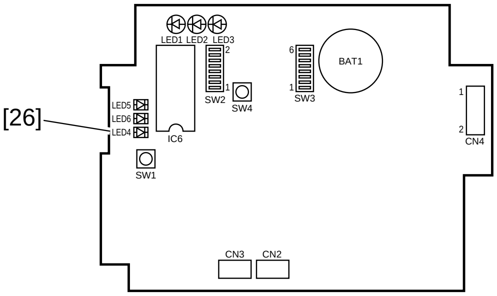

LED1 LED2 LED3
2
6
BAT1
1
SW2
SW4
1
SW3
[26]
LED5
LED6
LED4
IC6
1
2
CN4
SW1
CN3
CN2

Figure 12-616

19) Place a call to the service station to find out whether the initial settings for the controller ended. If the attempt ended in failure, go back to RAM initialization, i.e., perform from step 12) to 14) and try initial settings once again.

Caution:
Be sure to check with the service station to make sure that the settings of the controller are correct.

20) Try to place a call to the service station. Press the push switch (SW4) [21] on the board of the controller.
LED6 [27] (red) should turn on: when a transmission ends successfully, the LED should turn off; if it ends in failure, the LED (red) should flash.
Press the push switch SW4 [21] once again if the LED6 [27] flashes.
A press on the push switch SW1 [28] while LED6 [27] is flashing will stop the ongoing transmission attempt.

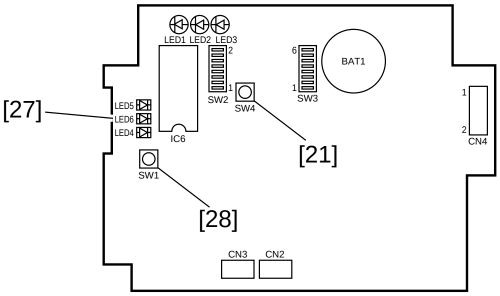

LED1 LED2 LED3
2
6
BAT1
1
SW2
SW4
1
SW3
[27]
LED5
LED6
LED4
IC6
1
2
CN4
[21]
SW1
[28]
CN3
CN2

Figure 12-617

21) Check to make sure that the communication between the copier and the controller is normal.
    Connect the copier's power plug, and turn on the power switch; then, check that LED2 [29] (orange) is flashing.

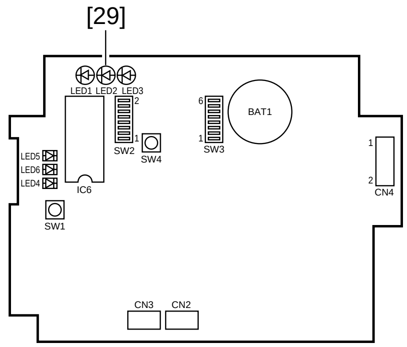

[29]
LED1 LED2 LED3
LED5
LED6
LED4
IC6
SW1
SW2
SW4
SW3
BAT1
CN4
CN3
CN2

Figure 12-618

22) Press the copier's Copy Start key, and check to make sure that LED3 [30] (pink) flashes each time paper is delivered.

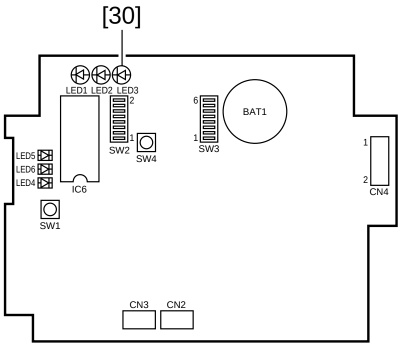

[30]
LED1 LED2 LED3
LED5
LED6
LED4
IC6
SW1
SW2
SW4
SW3
BAT1
CN4
CN3
CN2

Figure 12-619

23) Attach the switch settings label [31] on the upper cover of the controller. (The label should be filled out with switch settings.)

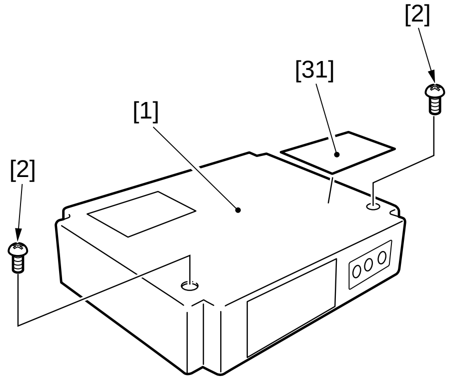


Figure 12-620

24) Secure the upper cover [1] of the controller with two screws [2]. (When doing so, check to make sure that the cable of the power supply unit is retained by the cable guide inside the controller and is not trapped by the upper cover [1].)

CHAPTER 13

MAINTENANCE AND SERVICING

I. PERIODICALLY REPLACED PARTS 13-1
II. CONSUMABLES AND DURABLES 13-1
  A. Copier 13-1
  B. Paper Deck 13-2
III. SCHEDULED SERVICING CHART 13-3
IV. SCHEDULED SERVICING TABLE 13-5
  A. Copier 13-5
  B. Paper Deck 13-6

I. PERIODICALLY REPLACED PARTS

The machine does not have parts that need to be replaced on a periodical basis.

II. CONSUMABLES AND DURABLES

A. Copier

Some parts of the machine may require replacement once or more over the period of warranty because of wear or damage. Replace them as necessary.

As of Dec. 1998

No.	Parts name	Parts No.	Q'ty	Life (copies)	Remarks
1	Pick-up roller	FF5-4552-020	2	120,000	Actual copies made.
2	Feeding roller	FF5-4552-020	2	120,000	Actual copies made.
3	Separation roller	FF5-4634-020	2	120,000	Actual copies made.
4	Pick-up roller (multifeeder)	FB1-8581-000	1	240,000	Actual copies made.
5	Separation pad (multifeeder)	FC1-9022-030	1	240,000	Actual copies made.
6	Transfer roller	FF5-6980-000	1	240,000	
7	Separation static eliminator	FF5-7246-000	1	240,000	
8	Scanning lamp	FH7-3314-000	1	240,000	
9	Pre-exposure lamp	FG5-6297-000	1	240,000	
10	Developing cylinder	FG6-0626-000	1	480,000	
11	Upper fixing roller	FB5-0289-000	1	240,000	
12	Lower fixing roller	FB4-2867-000	1	240,000	
13	Upper fixing separation claw	FB1-7075-000	5	240,000	
14	Lower fixing separation claw	FA2-9037-000	2	240,000	
15	Fixing cleaning belt	FA3-8908-000	1	160,000	
16	Heat insulating bush	FB1-6823-000	2	240,000	
17	Fixing heater (main)	FH7-4570-000	1	360,000	
18	Fixing heater (sub)	FH7-4573-000	1	360,000	
19	Thermistor	FG6-3881-000	1	240,000	
20	Internal delivery roller	FB4-2901-000	1	240,000	
21	Internal delivery sensor (PS6)	FH7-7394-000	1	500,000	

B. Paper Deck

As of Dec. 1998

No.	Parts name	Parts No.	Q'ty	Life (copies)	Remarks
1	Paper deck pick-up roller	FB4-2033-000	2	250,000	Actual copies made.
2	Paper deck feeding roller	FB4-2034-000	2	250,000	Actual copies made.
3	Paper deck separation roller	FB2-7777-000	1	250,000	Actual copies made.

III. SCHEDULED SERVICING CHART

Caution:

1. As a rule, provide scheduled servicing every 120,000 copies.
2. Check the service book before setting out on a visit, and take replacement parts as needed.

No.	Work	Checks	Remarks
1	Meet the person in charge.	Checking the conditions.	
2	Record the counter reading.	Check the faulty copies.	
3	Make test copies.	a. Image density b. Background for soiling c. Characters for clarity d. Leading edge margin* e. Fixing, registration, and back (for soiling) f. Counter operation	*Standard of 2.5 ±1.0 mm.
4	Clean the optical assembly: • Reflecting plate • Lens • No. 1, 2, 3 mirrors • Dust-proofing glass • Standard white plate		Use a blower brush; if the dirt is excessive, use alcohol. Dry wipe the standard white plate.
5	Clean the transfer guide: • Transfer guide plate (upper, lower) • Transfer charging assembly guide rail		Be sure to remove the drum unit before cleaning.
6	Clean the separation/feeding assembly: • Separation static eliminator • Feeding belt		
7	Clean the fixing/delivery assembly: • Fixing assembly inlet guide • Separation claw (upper, lower)		When replacing the drum cartridge, clean the separation claw (upper, lower).
8	Provide scheduled servicing according to the number of copies made.		

No.	Work	Checks	Remarks
9	Clean the copybook glass.		
10	Make test copies.		
11	Perform the Image Adjustment Basic Procedure.		
12	Make sample copies.		
13	Put the sample copies in order, and clean up the area around the machine.		
14	Record the final counter reading.		
15	Fill out Service Book, and report to the person in charge.		

IV. SCHEDULED SERVICING TABLE

Caution:
Do not use solvents/oils not indicated here.

A. Copier

△: Clean ●: Replace ×: Lubricate ☐: Adjust ◎: Inspect

Unit	Part	Installation	every 60,000	every 120,000	every 240,000	Remarks
Scanner drive assembly	Scanner rail			△ ×		Use lubricant.
Optical assembly	No. 1 through No. 3 mirrors			△		Note
	Dust-proofing glass			△		
	Lens			△		
	Reflecting plate			△		
	Original size sensor			△		
Developing assembly	Developing assembly roll			△		
Feeding assembly	Transfer guide		△			During a visit. Clean as necessary.
	Feeding belt			△		
	Feeding assembly base			△		
Fixing assembly	Fixing assembly inlet guide			△		
	Upper separation claw		△		●	During a visit. Clean as necessary.
	Lower separation claw		△		●	During a visit. Clean as necessary.

Note: For cleaning intervals, use the hardware counter reading as a reference.

B. Paper Deck

△ : Clean ● : Replace × : Lubricate □ : Adjust ◎ : Inspect

Unit	Part	Maintenance intervals					Remarks
		Installation	every 250,000	every 500,000	every 750,000	every 1,000,000	
Pick-up assembly	Pick-up roller		●				
	Pick-up/feeding roller		●				
	Separation roller		●				
	Feeding roller, roll		△				

CHAPTER 14

TROUBLESHOOTING

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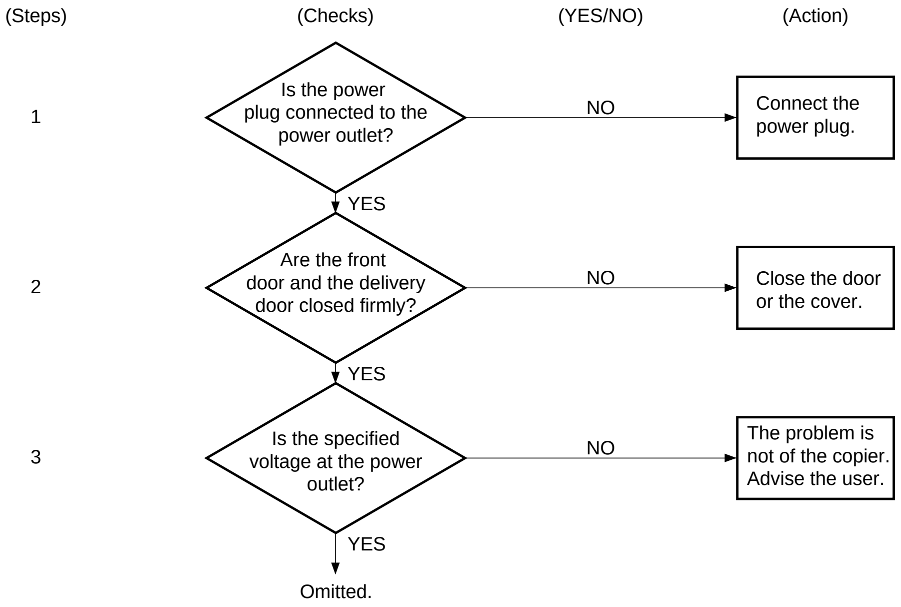
You will find troubleshooting steps organized in tables which are modified versions of general flow charts. Study the following for an idea of how to consult them.

EX.AC power is absent.

Cause	Step	Checks	YES/NO	Action
Power plug	1	Is the power plug connected to the power outlet?	NO	Connect the power plug.
Covers	2	Are the front door and the delivery cover closed firmly?	NO	Close the door and the cover.
Power supply	3	Is the specified voltage present at the power outlet?	NO	The problem is not of the machine. Advise the user.
	4	Is the specified voltage present between J1-1 and J1-2? (J1 is found near the power cord mount.)	YES	Go to step 6.

- If you want to find out the cause (possible faulty part), see the column under "Cause." In the case of "AC power is absent," the power plug may be disconnected, the covers may not be closed firmly, or the main power supply is absent.
- If you want to find out the action to take or the steps to correct a specific problem, go through the steps in order. Answer YES or NO to the questions under "Checks," and take the action indicated accordingly.


(Steps)
(Checks)
(YES/NO)
(Action)
1
Is the power plug connected to the power outlet?
NO
Connect the power plug.
YES
2
Are the front door and the delivery door closed firmly?
NO
Close the door or the cover.
YES
3
Is the specified voltage at the power outlet?
NO
The problem is not of the copier. Advise the user.
YES
Omitted.

- When checking the voltage using a meter, you may come across such instructions as "Measure the voltage between J109-1 (+) and J109-2 (-) on the DC controller PCB." Connect the positive probe of the meter to the terminal marked (+) and the negative probe to the terminal marked (-).

I. MAINTENANCE AND INSPECTION

A. Image Basic Adjustment Procedure

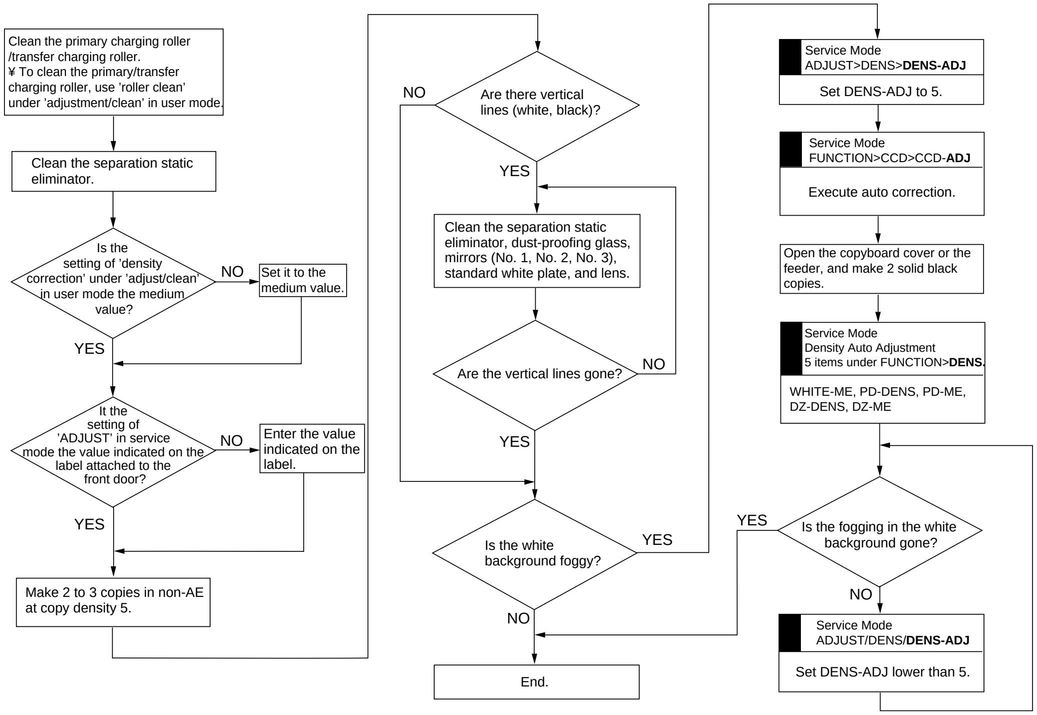

Clean the primary charging roller /transfer charging roller.
¥ To clean the primary/transfer charging roller, use 'roller clean' under 'adjustment/clean' in user mode.
Clean the separation static eliminator.
Is the setting of 'density correction' under 'adjust/clean' in user mode the medium value?
NO
Set it to the medium value.
YES
It the setting of 'ADJUST' in service mode the value indicated on the label attached to the front door?
NO
Enter the value indicated on the label.
YES
Make 2 to 3 copies in non-AE at copy density 5.
NO
Are there vertical lines (white, black)?
YES
Clean the separation static eliminator, dust-proofing glass, mirrors (No. 1, No. 2, No. 3), standard white plate, and lens.
Are the vertical lines gone?
NO
YES
Is the white background foggy?
YES
NO
End.
Service Mode ADJUST>DENS>DENS-ADJ
Set DENS-ADJ to 5.
Service Mode FUNCTION>CCD>CCD-ADJ
Execute auto correction.
Open the copyboard cover or the feeder, and make 2 solid black copies.
Service Mode Density Auto Adjustment 5 items under FUNCTION>DENS.
WHITE-ME, PD-DENS, PD-ME, DZ-DENS, DZ-ME
YES
Is the fogging in the white background gone?
NO
Service Mode ADJUST/DENS/DENS-ADJ
Set DENS-ADJ lower than 5.

Figure 14-101

B. Points of Scheduled Servicing

Copyboard/Scanner

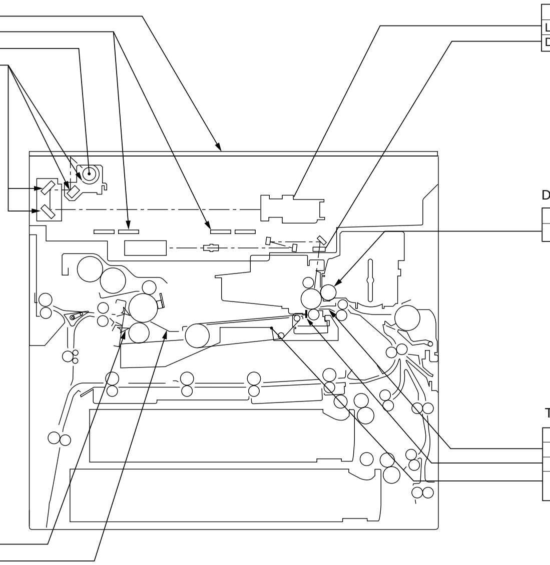
Item	Tool/solvent	Work/remarks
Copyboard glass	Alcohol	Clean.
Original size sensor	Blower brush	Clean.
Scanning lamp	Lint-free paper	Dry-wipe.
Reflecting plate	Blower brush	As necessary, dry-wipe with lint-free paper.
No.1 through No.3 mirrors		
Standard white plate	Alcohol	Clean
Scanner rail	Alcohol, Lubricant	Clean, and lubricate.

Optical Assembly

Item	Tool/solvent	Work/remarks
Lens	Blower brush	Clean.
Dust-proofing glass	Blower brush	Clean.

Developing Assembly

Item	Tool/solvent	Work/remarks
Developing roll	Alcohol	Clean.



Transfer/Feeding/Pick-Up Assembly

Item	Tool/solvent	Work/remarks
Transfer guide	Moist cloth*	Clean.
Static eliminator	Special brush	Clean.
Feeding assembly base/Feeding belt	Moist cloth*	Clean.

*Take care not to leave droplets of water. Do not turn on the power before it is completely dry.

Fixing/Delivery Assembly

Item	Tool/solvent	Work/remarks
Separation	Solvent	Clean.
Inlet guide	Solvent	Clean.

Figure 14-102

II. STANDARDS AND ADJUSTMENTS

A. Image Adjustment

Adjust the image margin, and then the non-image width.

Adjusting the Image Leading Edge Margin and the Non-Image Width

a. Change the following settings in service mode so that they are as indicated on the service label.
   - ADJUST>ADJ-XY>**ADJ-X**, **ADJ-Y**
   - ADJUST>FEED-ADJ>**REGIST**

b. Adjusting the Image Margin

1) Put A4 or A3 paper in the cassette, and select the cassette.
2) Select '6' in service mode (TEST>PG>**TYPE**), and generate a solid black copy.
3) Make adjustments so that the margin is 2.5 ±1.5 mm.
   <Main Scanning Direction>
   Use the horizontal registration mount. (See A-2.)
   <Sub Scanning Direction>
   Use service mode (ADJUST>FEED-ADJ>**REGIST**; see A-1).

c. Adjusting the Non-Image Width

1) Select the cassette used for adjusting the image margin, and make a copy of the NA-3 Chart.

Caution:
Be sure that the NA-3 is placed on the copyboard glass correctly.

2) Make adjustments so that the leading edge and left/right non-image widths are 2.5 mm.
   <Main Scanning Direction>
   ADJUST>ADJ-XY>**ADJ-Y**
   <Sub Scanning Direction>
   ADJUST>ADJ-XY>**ADJ-X**

1	**Image Leading Edge Margin (REGIST; registration roller activation timing)**

Standard: 2.5 ±1.5 mm
For steps see the previous page.

- ■ COPIER>ADJUST>FEED-ADJ>REGIST

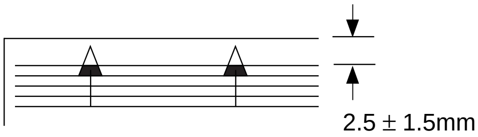


Figure 14-201

<Making Adjustments>

- To increase the leading edge margin, increase the setting of REGIST (thereby delaying the activation of the registration roller).
- To decrease the leading edge margin, decrease the setting of REGIST.
- ■ After adjusting the image leading edge margin, be sure to make adjustments under ADJUST>ADJ-XY>**ADJ-X**. (See the descriptions for service mode.)

2	**Adjusting the Left/Right Registration (front)**

a. Pick-Up from the Cassette
Check to see if the margin on the image front is 2.5 ±1.5 mm for each cassette.

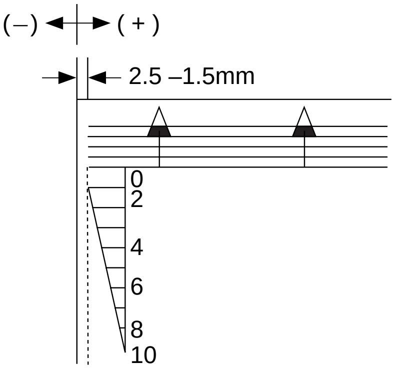


Figure 14-202

If it is not as indicated, perform the following:

1) Slide out the cassette in question.
2) Remove the two screws [1], and detach the horizontal registration mount.

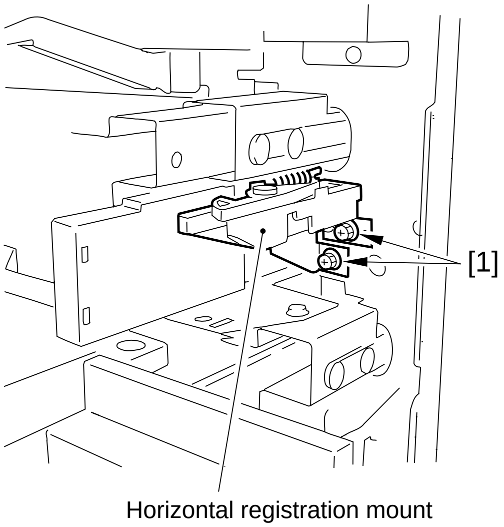


Figure 14-203

3) Loosen the hex screw, and move the horizontal registration plate to the front/rear to make adjustments.

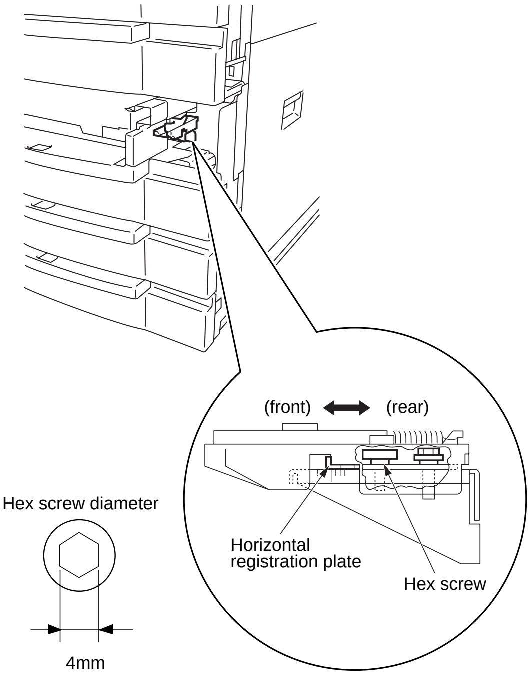

(front)
(rear)
Hex screw diameter
Horizontal registration plate
Hex screw
4mm

Figure 14-204

Caution:
When making adjustments, match the inside of the L angle of the horizontal registration plate with the appropriate graduation of the scale.

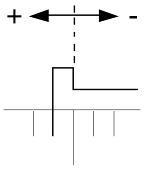


Figure 14-205

b. Pick-Up from the Multifeeder
Loosen the screw, and move the tray so that it is 2.5 ±1.5 mm in Direct mode.

3 Left/Right Registration for the 2nd Side of a Double-Sided/Overlay Copy (rear/front direction)

Check to see if the image on the 2nd side of a double-sided/overlay copy is as indicated.

- Standard: 2.5 mm ±2.0 mm

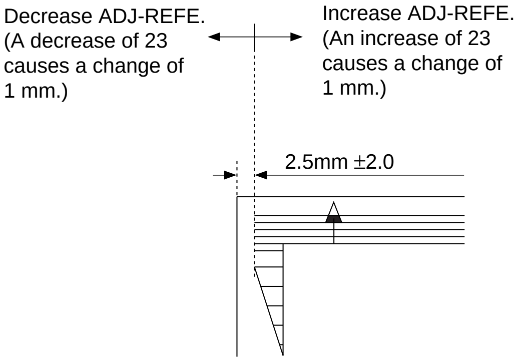

Decrease ADJ-REFE. (A decrease of 23 causes a change of 1 mm.)
Increase ADJ-REFE. (An increase of 23 causes a change of 1 mm.)
2.5mm ±2.0

Figure 14-206

If it is not as indicated, make adjustments using the following in service mode:
COPIER>ADJUST>FEED-ADJ
>**ADJ-REFE**

4 Left/Right Registration (side paper deck)

1) Make a copy of the Test Sheet, and check to see if the left/right registration is 0 ±1.5 mm.
2) If it is not as indicated, slide out the compartment, and turn the two screws to adjust the position of the latch plate of the deck open solenoid. (At this time, refer to the scale on the latch plate.)

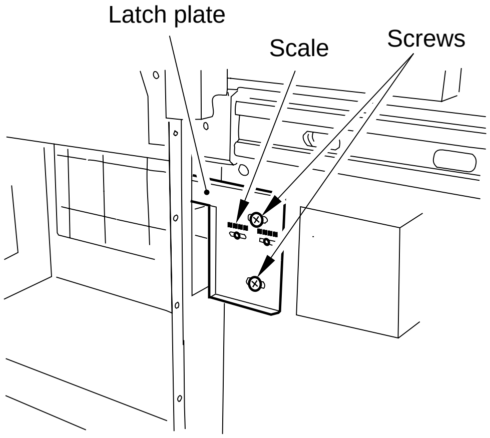


Figure 14-207 (rear left of the compartment)

5 AE Adjustment

The machine's AE (auto density adjustment) based on "priority on speed," and its method and concept are as follows:

1. Adjusting Priority on Speed AE Mode

ADJUST>AE>**AE-TBL** (1 through 9; 3 at time of shipment)

Adjust the density correction curve (text) for priority on speed AE mode.

- A higher setting makes text lighter.
- A lower setting makes text darker.

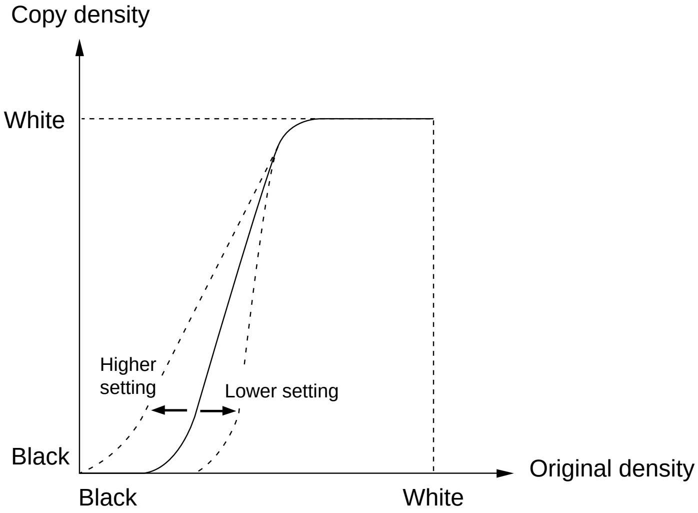


Figure 14-208

B. Exposure System

1 Routing the Scanner Drive Cable

Route the cable from [1] through [9]; then, go to the next item, "Adjusting the Mirror Position."

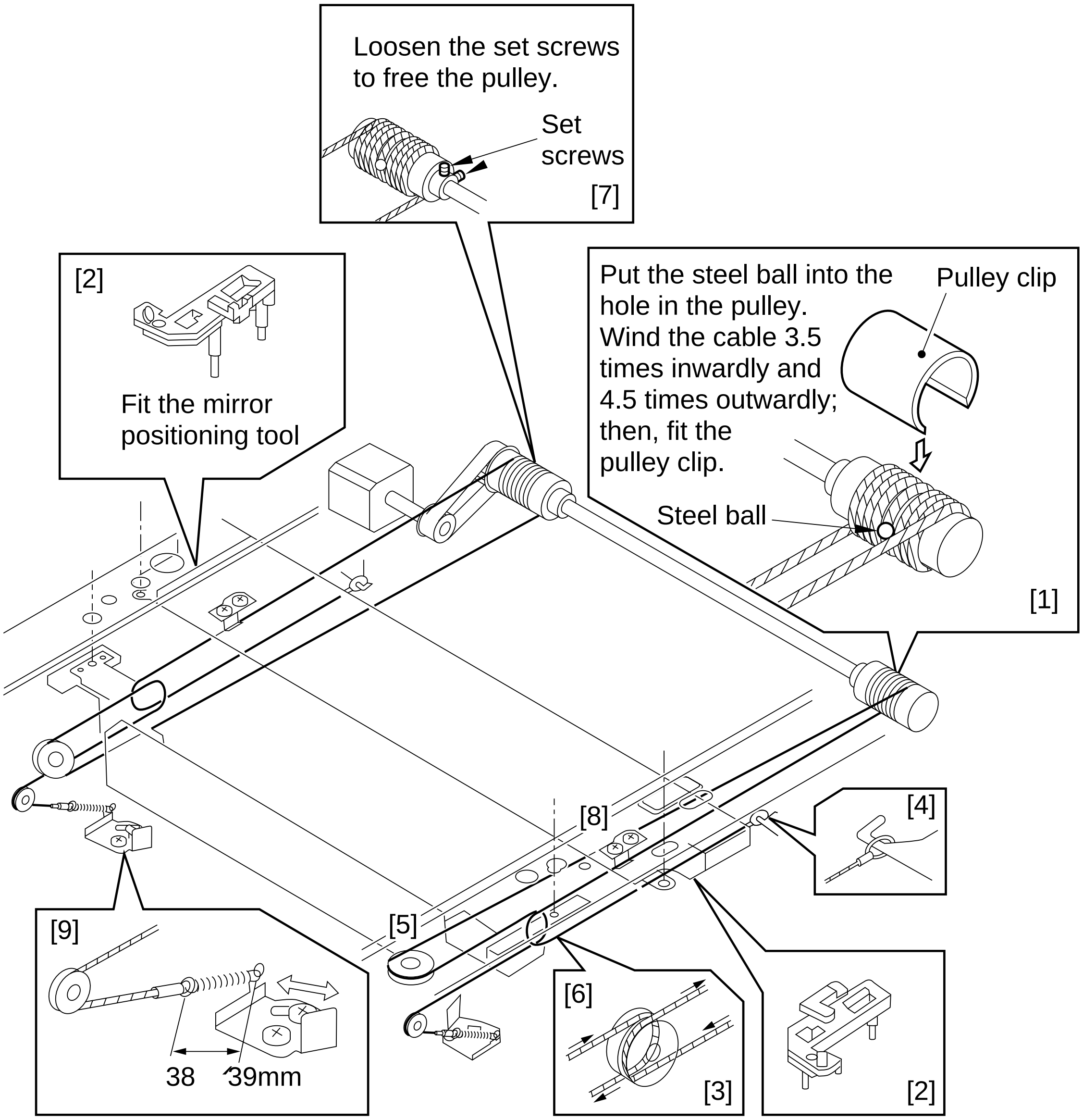
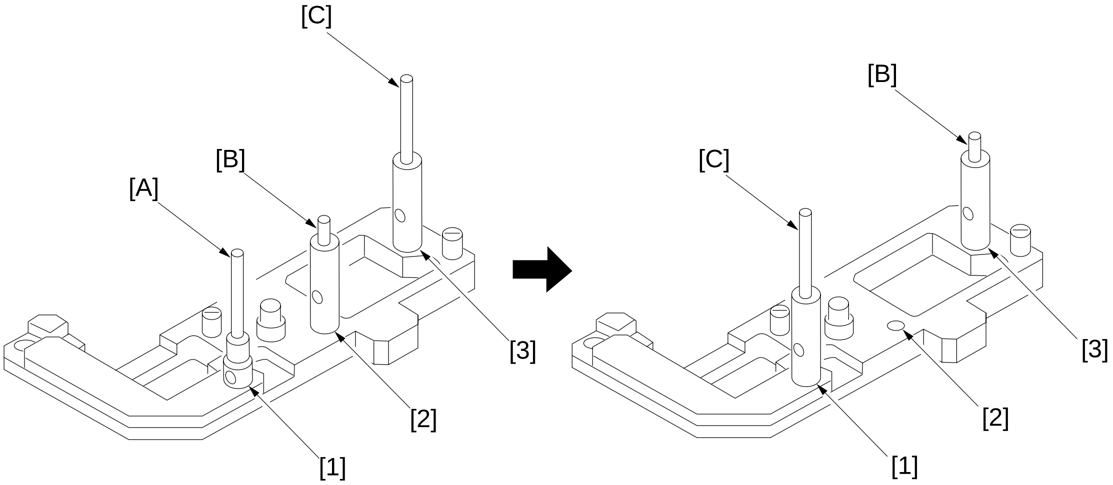

Loosen the set screws to free the pulley.
Set screws
[7]
[2]
Fit the mirror positioning tool
Put the steel ball into the hole in the pulley. Wind the cable 3.5 times inwardly and 4.5 times outwardly; then, fit the pulley clip.
Pulley clip
Steel ball
[1]
[8]
[4]
[9]
[5]
38 39mm
[6]
[3]
[2]

Figure 14-209

2	**Adjusting the Mirror Position (optical length between No. 1 mirror and No. 2/No. 3 mirror)**

Caution:

Use the mirror position tool FY9-3009-040. Be sure to relocate the pins before use.



FY9-3009-040 Before Repositioning the Pins

After repositioning the Pins

Figure 14-210

1) Loosen the screws on the metal fixings used to secure the cable.
2) Fit the mirror positioning tools (after repositioning its pins) to the No. 1 mirror mount and the No. 2 mirror mount.

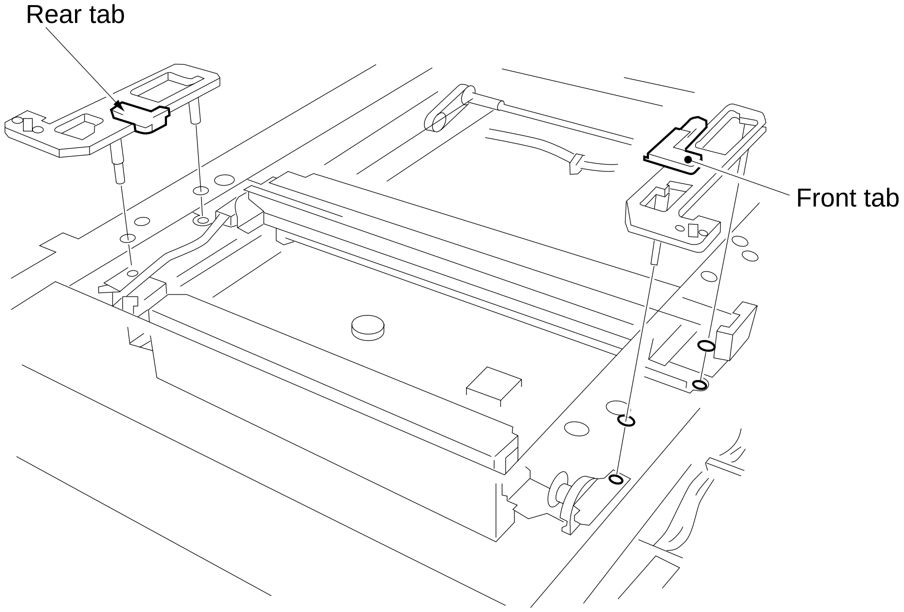


Figure 14-211

3) Tighten the fixing screws for the scanner cable previously loosened.
4) Detach the mirror positioning tools.

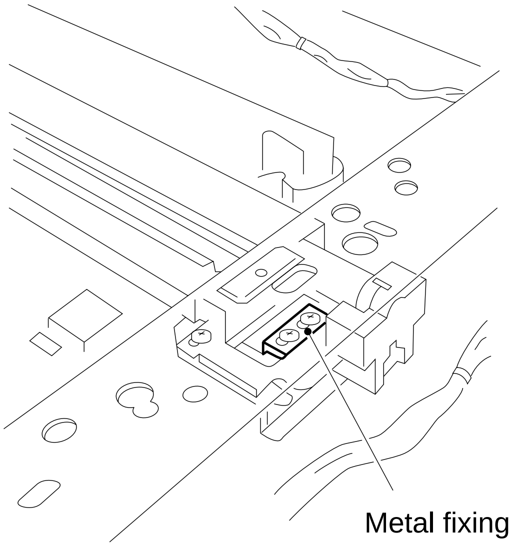


Figure 14-212

3 Mounting the Scanning Lamp

Keep the following in mind when mounting the scanning lamp:

1. Orient it so that the side (terminal) with the manufacturer's name is toward the rear.
2. Orient it so that its transparent side is toward the reflecting plate.
3. Do not touch the transparent side.

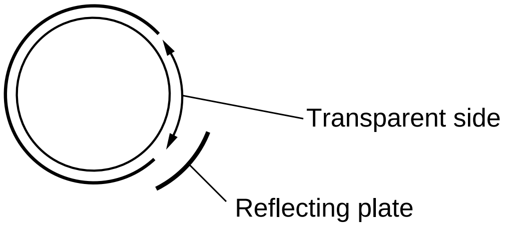


Figure 14-213

Make the following adjustments when replacing the scanning lamp:

1) Shading correction 2
   FUNCTION>CCD>**MAN-ADJ**
2) Auto density correction
   FUNCTION>DENS> **WHITE-ME**
   PD-DENS
   PD-ME
   DZ-DENS
   DZ-ME

For details, see the description for FUCNTION in service mode (VIII. of Chapter 14).

C. Image Formation System

1 When Replacing the Drum Unit

- Record the date and the counter reading on the label, and attach it to the front cover of the new drum unit.

æ t date date Datum	J E ^ [counter compteur Zähler	ı l notes note Notiz

- Clean the fixing separation claw (upper, lower).

2 Positioning the Developing Assembly Magnetic Seal

Mount the magnetic seal by butting it against the opening as shown.

Check to make sure that the magnetic seal is in firm contact with the housing.

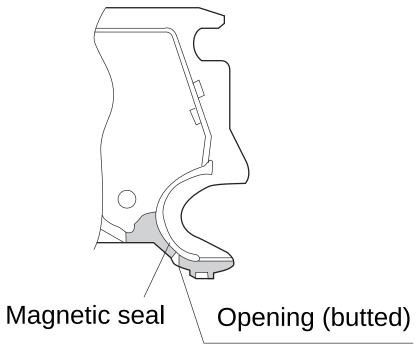


Figure 14-214

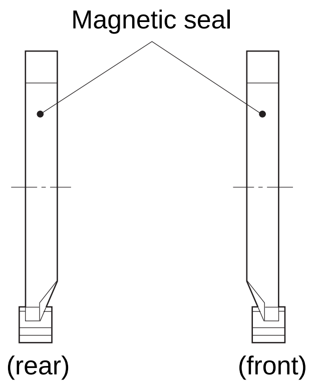


Figure 14-215

3 Mounting the Developing Assembly Blade

The blade is adjusted to a high accuracy when it is mounted to the blade mount. Avoid detaching it from its mount.

- If you must replace the blade on its own, be sure to adjust the position of the blade so that the gap between the blade and the developing cylinder is 0.21 ±0.03 mm when measured with a gap gauge (CK-0057-000).

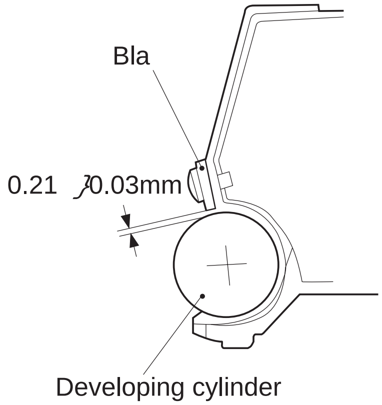


Figure 14-216

The surface of the developing cylinder can easily be damaged. Be sure to slide the gap gauge along its both ends.

4 Adjusting the Positioning the Primary Charging Roller Cleaning Solenoid

Make adjustments so that the length of the primary charging roller solenoid (SL1) indicated in the figure is 4.0 ±0.2 mm.

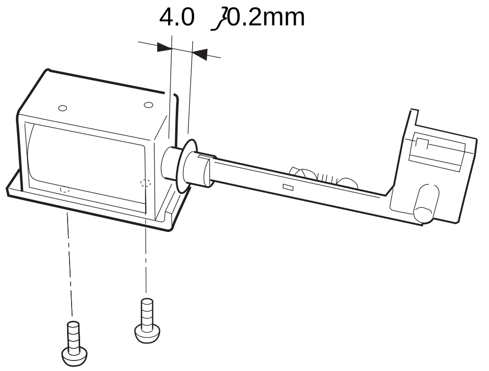


Figure 14-217

D. Pick-Up/Feeding System

1 Adjusting the Positioning the Multifeeder paper Guide Cam

Make adjustments so that the paper guide plate cam is as shown when the solenoid plate is in contact with the claw of the control ring.

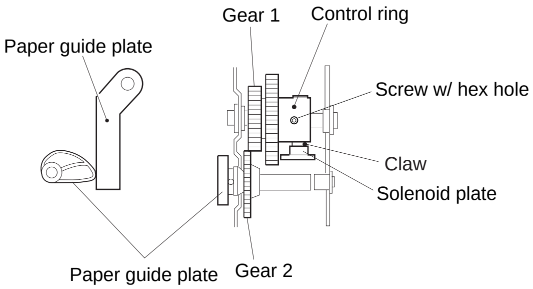

Gear 1
Control ring
Paper guide plate
Screw w/ hex hole
Claw
Solenoid plate
Paper guide plate
Gear 2

Figure 14-218

2 Attaching the Timing Belt in the Multifeeder

1) Butt the side guide plate of the multifeeder against the end (A; open condition).
2) Move the slide volume to the center (direction B), and fit the timing belt on the pulley.

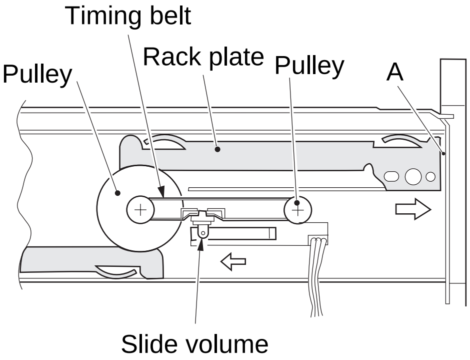


Figure 14-219

3 Mounting the Multifeeder Pick-Up Roller

Mount the multifeeder pick-up roller [1] so that the side with a cross [2] on its collar is toward the rear.

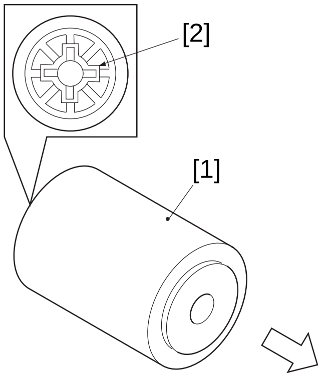


Figure 14-220

4	**Mounting the Delivery Assembly Paper Deflecting Plate Solenoid (SL2)**

1) Remove the delivery assembly.
2) Place the delivery assembly upright on a flat desk.
3) Push in the steel core of the paper deflecting plate 1 solenoid (SL2) until it stops.
4) Loosen the adjusting screw, and make adjustments so that the gap between the steel core E-ring of the solenoid and the solenoid frame is about 0.2 mm.
5) Mount the delivery assembly.

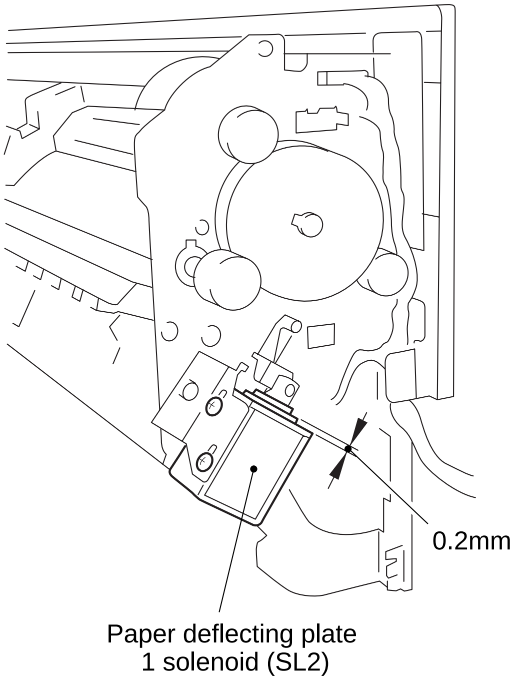


Figure 14-221

5	Orienting the Multifeeder Pick-Up Roller (side paper deck)

Mount the multifeeder pick-up roller by reversing the steps used to remove it with the following in mind:

- The pick-up roller used at the front and the one used at the rear are not interchangeable.
- The collar of the pick-up roller used at the front is silver in color.

When mounting the deck pick-up roller [1] for the front, orient it so that the marking [2] on the collar (silver) is toward the front, and the marking [3] on the side of the roller is toward the rear.

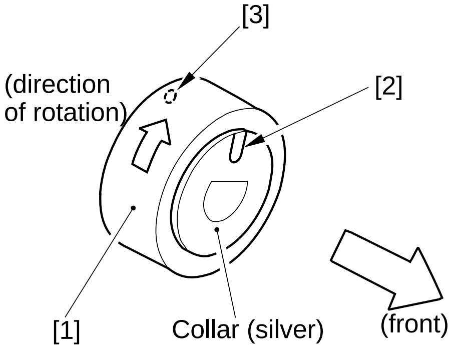


Figure 14-222 Pick-Up Roller for the Front

- The collar of the pick-up roller used at the rear is gold in color.

When mounting the deck-pick-up roller [4] for the rear, orient it so that the marking [5] on the side and the marking [6] on the collar (gold) are toward the rear.

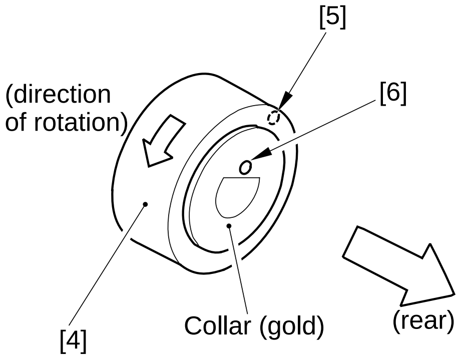


Figure 14-223 Pick-Up Roller for the Rear

6 Orienting the Side Paper Deck Feeding Roller

Mount the feeding roller [1] to the side paper deck pick-up assembly so that the belt pulley [2] is toward the front.

When attaching the pick-up/feeding roller rubber to the pick-up/feeding roller shaft, be sure that the marking [3] is toward the rear.

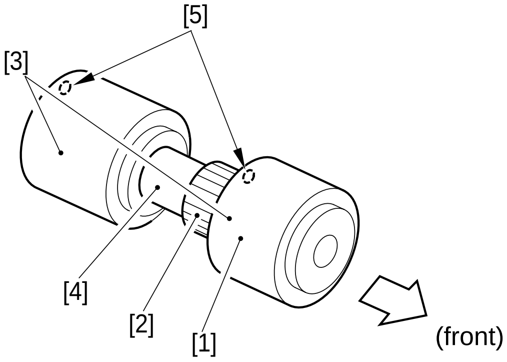


Figure 14-224

7 Positioning the Side Paper Deck Pick-Up Roller Releasing Solenoid

Take note of the position of the two fixing screws of the deck pick-up roller releasing solenoid with reference to the scale on the support plate before removing the solenoid. Or, mark the position of the solenoid on the support plate with a scriber.

When mounting the solenoid on its own, be sure to secure it back to its initial position.

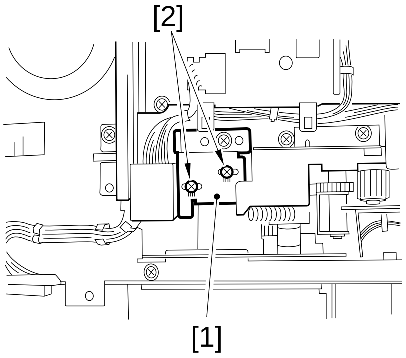


Figure 14-225

E. Fixing System

1 When Mounting the Fixing Heater

1) Do not touch the heater surface.
2) Orient it so that the side with the longer heater wire is toward the front.
3) Mount the main heater (700 W) to the right and the sub heater (600 W) to the left when viewing the fixing assembly from the front.
4) Connect the right faston of the heater to the main heater and the upper faston to the sub heater when viewing it from the rear. (The fastons are found at the rear.)

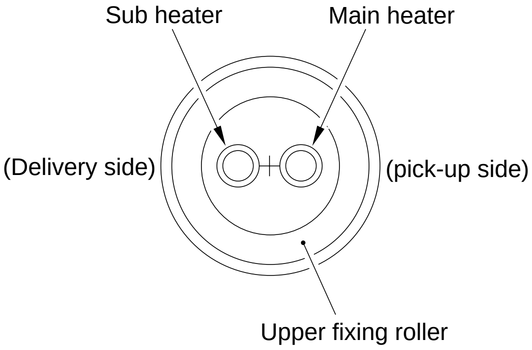


Figure 14-226

2 Positioning the Fixing Assembly Paper Guide

Caution:
If you removed the inlet guide plate, you would need to adjust the position of the inlet guide. To avoid the work, do not loosen the mounting screw (paint-locked) on the inlet guide mount; otherwise, be sure to set it to its initial position by referring to the scale on the fixing assembly.

3 Adjusting the Lower Fixing Roller Pressure (nip)

If you have replaced the upper fixing roller or the lower fixing roller, or if fixing faults occur, make the following adjustments:

If you are taking measurements while the fixing roller is cold, leave the machine alone for 15 min after it ends its wait period and make 20 copies before taking measurements:

<Taking Measurements>

1) Make an A4 solid black copy, and make a copy of it. Set the output in the multifeeder.
2) Select NIP-CHK in service mode (FUNCTION>FIXING), and press the OK key.
3) The paper will be picked up and is stopped between the fixing rollers temporarily; then, it will automatically be discharged in about 20 sec.
4) Measure the width of the area where toner is shiny (Figure 14-227).

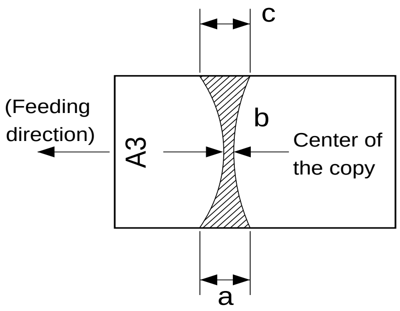


Figure 14-227

Caution:
a and c are points 10 mm from both edges of the copy paper.

Point	Measurements*
b	5.5 ±0.3 mm
a-c	0.5 mm or less

* Measured when the upper/lower roller is adequately heated.

Table 14-201

5) If not as indicated, turn the pressure adjusting screw 1 found at the rear and the front of the fixing assembly to make adjustments.

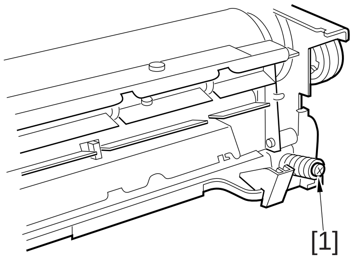


Figure 14-228

4	When Replacing the Lower Fixing Roller

When replacing the lower fixing roller or the bearing of the lower roller shaft, be sure to apply heat-resisting grease (MO-138S) to the shaft to prevent adhesion of the shaft and the bearing.

F. Electrical System

1 Replacing the Major Part

Parts	Description/Service mode	
Image processor PCB [A]	■ Before Replacement Generate stored data of ADJUST, OPTION, and COUNTER. ■ After Replacement 1) Execute RAM clear (image processor PCB). 2) Enter data under AJDUST and OPTION. 3) Execute shading auto correction 2. 4) Execute density correction. 4-1) Execute standard white plate density read. 4-2) Execute density auto correction. 4-3) Execute DZ density auto correction.	 FUNCTION>MISC-P>**P-PRINT** FUNCTION>CLEAR>**IP** YAKUNUKE FUNCTION>CCD>**MAN-ADJ** FUNCTION>DENS>**WHITE-ME** FUNCTION>DENS>**PD-DENS** FUNCTION>DENS>**DZ-DENS** FUNCTION>DENS>**DZ-ME**
Composite power supply PCB	■ After Replacement 1) Enter the values indicated on the label attached to the composite power supply PCB in service mode. 2) Execute shading auto correction 1. 3) Execute auto density correction.	 FUNCTION>CCD>**CCD-ADJ** Same as [A] above.
Laser scanner unit	1) Execute shading auto correction 1. 2) Execute auto density correction.	FUNCTION>CCD>**CCD>ADJ** Same as [A] above.
Laser unit		
CCD unit	1) Execute shading auto correction 2. 2) Execute auto density correction.	FUNCTION>CCD>**MAN-ADJ** Same as {A] above.
Scanning lamp		
DC controller PCB		
Standard white plate		
Control panel LCD	Adjust the coordinate position of the analog touch panel.	FUNCTION>PANEL>**TOUCHKEY**
Multifeeder size detecting volume	Store the paper width basic value for the multifeeder.	FUNCTION>CST>**MF-A4R, A6R, A4**
Fixing assembly	Nip (as indicated?)	FUNCTION>FIXING>**NIP-CHK**
Fixing cleaning belt	Execute cleaning belt clear.	COUNTER>MISC>**FIX-WEB**

2 Shading Auto Correction

- Shading auto correction may be either of two types (CCD-ADJ, MAN-AJD). Select the appropriate mode.
- In shading auto correction, various data measurements are taken and stored in the RAM on the image processor PCB for use as the target value for shading correction performed before scanning operation.

  The following are service mode item related to shading auto correction; see the appropriate service mode item for details:

ADJUST	ADJ-XY	**ADJ-S**	standard white plate read position
	CCD	**PPR**	standard white paper density data
		W-PLT	standard white plate density data
FUNCTION	CCD	**CCD-ADJ**	shading auto correction 1 (for normal image adjustment)
		MAN-ADJ	shading auto correction 2 (for PCB, lamp replacement)

■ Using CCD-ADJ

- Start service mode.

1) Press the asterisk key.
2) Press '2' and '8' on the keypad at the same time.
3) Press the asterisk key.
4) On the screen, select <COPIER>, <FUNCTION>, and <CCD> in sequence.
5) Select <CCD-ADJ>, and press the OK key. (You need not place standard white paper.)

■ Using MAN-ADJ

1) Remove the rear cover, and check the position of VR200 on the DC controller PCB.
2) Place the standard white paper on the copyboard glass.
3) Start service mode. (See steps 1) through 4) under "Using CCD-ADJ.")
4) Select <MAN-ADJ>, and press the OK key.
5) When VO is indicated and the beep is sounded, press the OK key. If the beep is not heard, turn VR200 on the DC controller PCB; when the beep is sounded, press the OK key. Adjustments are needed if LED201 turns on.
6) Check to see if END is indicated.

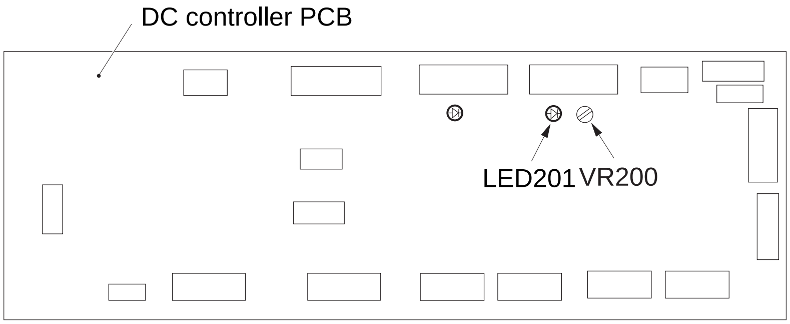


Figure 14-229

3 Copy Density Auto Correction

- Execute copy density auto correction for the following:
  The copy image is not proper (image fault).
  The laser unit has been replaced.
  The image processor has been replaced.
  The composite power supply PCB has been replaced.
- When executing copy density auto correction, be sure to execute the following three types (five items) as a set. Be sure to execute shading correction before executing density correction.

• Standard white paper density read	FUNCTION>DENS>**WHITE-ME**
• PD density auto correction	FUNCTION>DENS>**PD-DENS**
(text, text/photo mode)	FUNCTION>DENS>**PD-ME**
• DZ density auto correction	FUNCTION>DENS>**DZ-DENS**
(photo mode)	FUNCTION>DENS>**DZ-ME**

- The following blocks are subjected to correction processing:
  Laser characteristic correction
  Developing bias correction
- Executing the Mode

a. Executing Shading Correction

1) Start service mode.
2) Select COPIER>FUNCTION>CCD in sequence; then, select <**CCD-ADJ**>.
3) Press the OK key. (You need not place standard white paper.)
4) End service mode; then, make two solid black copies while holding the feeder or the copyboard glass open. Check to make sure that white lines did not occur.

b. Executing WHITE-ME
1) Place five sheets of standard white paper, and close the feeder or the copyboard cover.
   - Be sure that the paper is A4 or larger and placed vertically.
2) Start service mode, and select COPIER>FUNCTION-DNS>**WHITE-ME**.
3) Press the Copy Start key.
   - The scanner moves forward and reads the white paper.

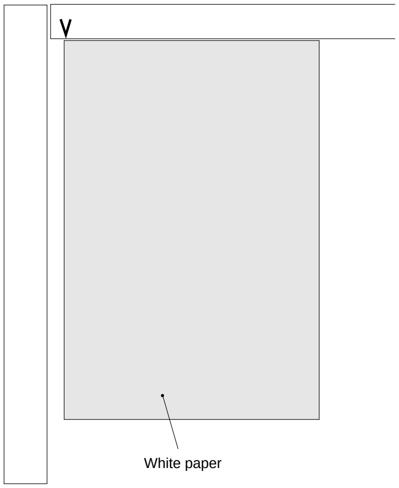


Figure 14-230

c. Executing PD-DENS
1) Select COPIER>FUNCTION>DENS>**PD-DENS**, and press the OK key.
   - A 15-graduation patter will be generated. (The patches are black.)

d. Executing PD-ME
1) Remove the white paper from the copyboard, and place the PD-DENS output on the copyboard.
   - Place the printed side down (for reading the pattern).
   - Place the white side as the leading edge and the black side toward the center.
   - Be sure to place originals against the marking V on the copyboard glass.

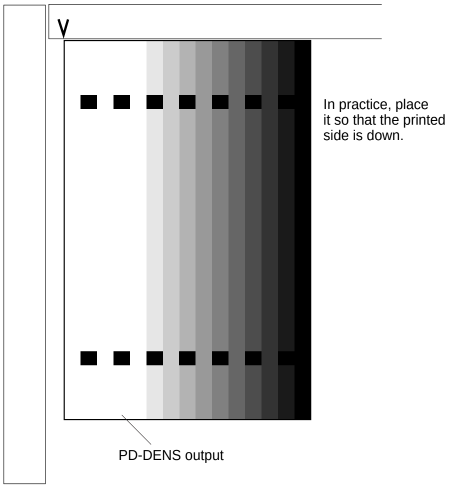


Figure 14-231

2) Select <**PD-ME**> under <PD-DENSE>; then, press the OK key.
   - The scanner makes 13 scans.
3) After reading operation, PD auto density correction ends when OK is indicated to the right of <**PD-ME**>. If NG, check the following:
   - Is the original placed correctly?
   - Is the original the PD-DENS output? (The patches are black.)

   After checking the above, execute PD-DENS once again. If still NG, go to the next page.

d. Executing DZ-DENS

1) Select COPIER>FUNCTION>DENS>**DZ-DENS**; then, press the OK key.
   - A 15-gradation pattern will be generated. (The patches are white.)

e. Executing DZ-ME

1) Remove the PD-DENS output (black patches), and place the DZ-DENS output (white patches) on the copyboard glass.

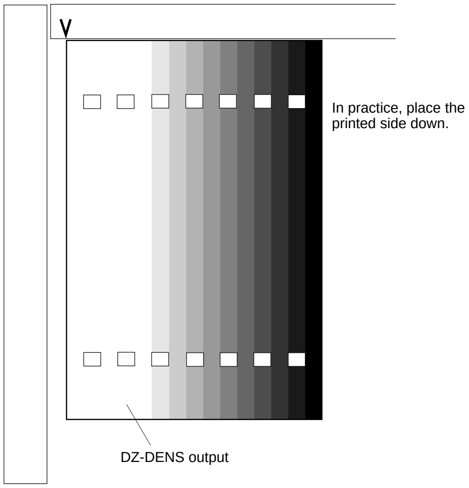


Figure 14-232

2) Select <**DZ-ME**> under DZ-DENS, and press the OK key.
   - The scanner makes 13 scans.
3) After read operation, PD auto density correction ends when OK is indicated to the right of <**DZ-ME**>. If NG, check the following:
   - Is the read original placed correctly?
   - Is the read original the DZ-DESN output? (The patches are white.)

   After checking the above, execute DZ-DENS once again. If still NG, go to the next page.

■ If PD-ME/DZ-ME Is NG

1. Clean the scanner.

2. Isolate the problem.
   Execute toner stirring COPIER>FUNCTION>INSTALL>**TONER-S**
   Execute drum resistance measurement COPIER>FUNCTION>DPC>**D-GAMMA**
   A this time, take notes of the measurement of D-GAMMA.

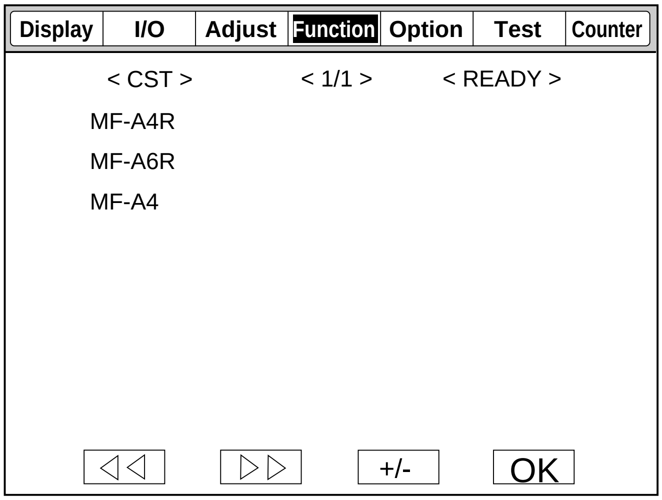
3. Execute copy density correction once again.
   If the result is still NG, perform the following according to the measurement of D-GAMMA.
   If 2.3 or higher, replace the drum cartridge.
   If 0.1 or lower, replace the developing assembly.

4 Storing the Multifeeder Paper Width Basic Value

Execute this mode if you have replaced the multifeeder paper width detecting volume.
Be sure to try A4R, A6R, and A4 in the order indicated.

- Execution

1) Replace the paper width detecting VR.
2) Start service mode.
   asterisk key -> '2' and '8' at the same time -> asterisk key
3) Select COPIER>FUNCTION>CST, and highlight <**A4R**>.



< CST > < 1/1 > < READY >
MF-A4R
MF-A6R
MF-A4

Figure 14-233

4) Place A4R paper in the multifeeder, and adjust the side guide to the paper width.
5) Press the OK key.
6) Repeat steps 3) through 5) for A6R and A4 as in A4R.
7) Press the Reset key to end service mode; then, turn off and then on the main power switch.

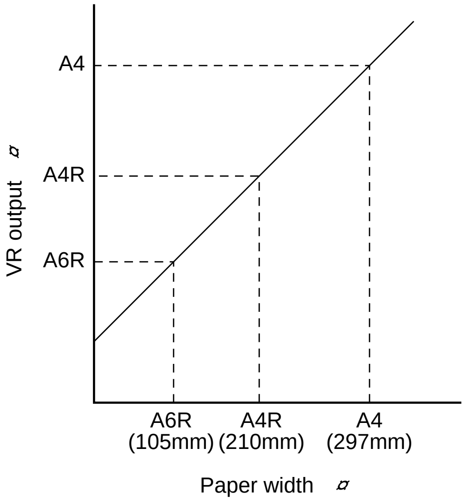


Figure 14-234

5 Checking the Photointerrupters

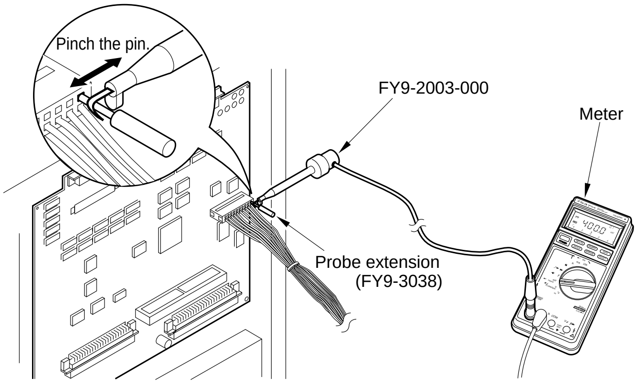
The photointerrupters may be checked in either of the following two methods:
a. Using a meter.
b. Using service mode (I/O mode).

a. Using a Meter

You cannot insert the meter probe directly into the connectors of the machine's PCBs, as they are designed specially to enable smooth connection. Obtain a probe extension tool (FY9-3038-000/ FY9-3039-000).

1) Set the digital multimeter range to 12 VDC.
2) Connect the meter probe to GND (0 VDC) of the DC controller PCB.
3) Make a check as indicated. (Use the probe extension and the clip as necessary.)

[Connection 1]


Pinch the pin.
FY9-2003-000
Meter
Probe extension
(FY9-3038)

[Connection 2]

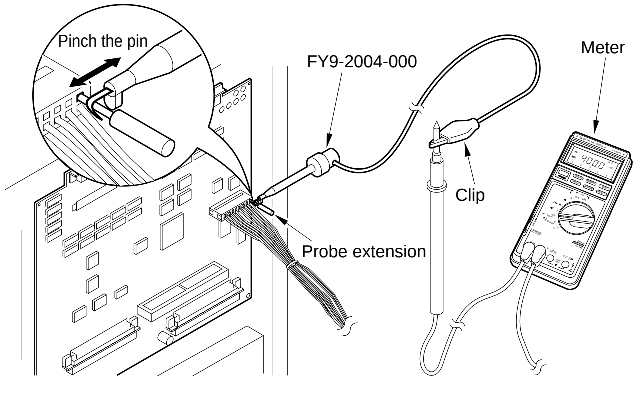

Pinch the pin
FY9-2004-000
Meter
Clip
Probe extension

Figure 14-235

b. Using Service Mode
1) Start service mode.
2) Press COPIER>I/O, and select DC-CON.
The bit number notations in the tables that follow represent the following:

```
ex.P001 00000000
        |      |
       bit7   bit0
```

Notation	PS1		PS2		PS3	
name	Scanner home position sensor (PS1S)		Copyboard cover open/ closed sensor (PS2S)		Multifeeder paper sensor (PS3S)	
Meter probe	J112-B5		J108-B2		J108-B17	
Service mode	-		P003-bit13		P005-bit1	
Check (Normal if described.)	While in standby, move the scanner from the home position.		While in standby, open and close the copyboard cover.		While in standby, place paper on the multifeeder tray.	
	When the scanner is at the home position,	When the copyboard cover is closed,	When the scanner is not at the home position,	When the cupboard cover is opened,	When paper is placed,	When paper is not placed,
Display reading	-	1	-	0	1	0
Meter reading (approx.)	5 V	0 V	5 V	0 V	5 V	0 V

Notation	PS4		PS6		PS7	
name	Registration paper sensor (PS4S)		Internal delay sensor (PS6S)		External delivery sensor (PS7S)	
Meter probe	J108-B11		J106-2		J107-2	
Service mode	P004-bit3		P004-bit8		P004-bit5	
Check (Normal if described.)	While in standby, open the right door, and insert paper.		While in standby, open the delivery assembly, and move the flag of PS6.		While in standby, open the delivery assembly, and move the flag of PS7.	
	When paper is not inserted,	When paper is inserted,	When the flag is blocking the sensor (paper absent),	When the flag is not blocking the sensor (paper present),	When the flag is not blocking the sensor (paper present),	When the flag is blocking the sensor (paper absent),
Display reading	1	0	1	0	1	0
Meter reading (approx.)	5 V	0 V	5 V	0 V	5 V	0 V

Notation	PS8		PS9		PS10	
name	Duplexing assembly inlet paper sensor (PS8S)		Re-pick up sensor (PS9S)		Horizontal registration paper sensor (PS10S)	
Meter probe	J114-B2		J114-B5		J102-A8	
Service mode	P004-bit5		P004-bit10		P004-bit11	
Check (Normal if described.)	While in standby, open the delivery assembly, and move the flag of PS8.		While in standby, open the duplexing unit, and move the flag of PS9.		While in standby, open the right door; then, insert paper into the re-pick up assembly, and slide it to the rear.	
	When the flag is blocking the sensor (paper absent),	When the flag is not blocking the sensor (paper present),	When the flag is blocking the sensor (paper absent),	When the flag is not blocking the sensor (paper present),	When the paper is slid to the rear,	When the paper is not slid to the rear,
Display reading	1	0	1	0	1	0
Meter reading (approx.)	5 V	0 V	5 V	0 V	5 V	0 V

Notation	PS11		PS12		PS13	
name	Vertical path sensor (PS11)		Right cover open/closed detecting sensor (PS12S)		Left cover open/closed sensor (PS13S)	
Meter probe	J108-B8		J108-B14		J114-5	
Service mode	P004-bit2		P003-bit13		P003-bit11	
Check (Normal if described.)	While in standby, move up the lever of PS11.		While in standby, open the right door.		While in standby, open the left door.	
	When the lever is moved up (paper present),	When the lever is moved back (paper absent),	When the right door is closed,	When the right door is open,	When the left door is closed,	When the left door is open,
Display reading	1	0	1	0	1	0
Meter reading (approx.)	5 V	0 V	5 V	0 V	5 V	0 V

Notation	PS14		PS18		PS19	
name	Front cover open/ closed sensor (PS14S)		Cassette 1 pick-up sensor (PS18S)		Cassette 1 pick-up sensor (PS19S)	
Meter probe	J102-A11		J108-A17		J108-A18	
Service mode	P003-bit4		P004-bit0		P004-bit1	
Check (Normal if described.)	While in standby, open the front cover.		While in standby, slide out the cassette, and insert paper between the pick-up rollers.		While in standby, slide out the cassette, and insert paper between pick-up rollers.	
	When the front cover is open,	When the front cover is closed,	When paper is inserted,	When paper is not inserted,	When paper is inserted,	When paper is not inserted,
Display reading	1	0	1	0	1	0
Meter reading (approx.)	5 V	0 V	5 V	0 V	5 V	0 V

Notation	PS40	
name	Fixing assembly outlet sensor (PS40S)	
Meter probe	J114-A2	
Service mode	P004-bit9	
Check (Normal if described.)	While in standby, push the lever on the fixing assembly outlet assembly.	
	When the lever is pushed,	When the lever is not pushed,
Display reading	1	0
Meter reading (approx.)	0 V	5 V

III. TROUBLESHOOTING IMAGE FAULTS

A. Initial Checks

1. Checking the Site Environment

a. The power supply voltage must be as rated (±10%). (Do not disconnect the power plug at night.)
b. The machine must not be subject to high temperature/humidity (near water faucets, water boilers, humidifiers) or cold. It must not be near sources of fire or in an area subject to dust.
c. The machine must not be subject to ammonium gas.
d. The machine must not be exposed to direct sunshine. (As necessary, provide curtains.)
e. The room must be ventilated well.
f. The floor must be level.
g. The machine must remain powered throughout day and night.

Check the site against the foregoing requirements.

2. Checking the Originals

Determine whether the problem is due to the original or the machine.

a. The copy density lever must normally be at 5 ±1.
b. Reddish originals can produce copies with poor contrast; e.g., red sheets, slips.
c. Diazo copies or originals with transparency tend to produce outputs easily mistaken for "foggy" copies.

Originals prepared in light pencil can produce outputs easily mistaken for "light" images."

3. Checking Parts

Check the copyboard cover, copyboard glass, and standard white plate for scratches or dirt.

If soiled, clean the part with mild detergent or alcohol; if scratched, replace it.

4. Checking the Charging Assemblies

a. Check the charging assemblies for dirt and the charging wires for a fault (scar).
b. Clean the charging rollers, shield plate, and block (front, rear) for dirt. If the dirt cannot be removed, replace the part.
c. Check to make sure that all charging assemblies are set properly.

5. Checking the Developing Assembly

a. Check to make sure that the rolls on both ends of the developing assembly are in contact with the drum.

b. Check to make sure that the surface of the developing cylinder is coated with an even layer of toner.

6. Checking the Paper

a. Check the paper to see if it Canon-recommended paper.

b. Check to see if the paper is moist. Try fresh copy paper.

7. Checking the Periodically Replaced Parts

Replace any part that has reached the end of its life by referring to the Scheduled Servicing Chart and the Periodically Replaced Parts Table.

8. Others

In winter, bringing a machine from a cold to warm room can cause condensation inside it, leading to various problems.

a. Condensation on the scanner (glass, mirror, lens) can cause the images to be lighter.

b. Condensation on a charging assembly can cause leakage.

c. Condensation on the pick-up/feeding guide can cause feeding faults.

If condensation is noted, dry wipe the part or leave the machine alone for 60 min.

Note:
If the copies are uneven in density (between front and rear), too light, or foggy, try the Image Adjustment Basic Procedure first.

B. Sample Image Faults

C. Troubleshooting Image Faults

1 The copy is too light (halftone area only).

Cause	Step	Check	Yes/No	Action
	1	Perform the Image Adjustment Basic Procedure. Is the problem corrected? Be sure that the pattern print is correctly placed when executing FUNCTION>DENS>PD-ME, DZ-ME.	YES	End.
AE adjustment	2	Make a copy in AE mode. Is the text too light?	YES	Execute AE adjustment. Decrease the setting of COPIER>ADJUST>AE>AE-TBL.
Developing assembly	3	Are the rolls of the developing assembly in firm contact with the drum?	NO	Check the developing assembly locking lever, and check the surface of the developing assembly rolls for foreign mater (e.g., toner).
Developing assembly	4	Is the surface of the developing cylinder coated with an even layer of toner?	NO	Check the developing assembly.
Scanner	5	Clean the mirror, lens, and dust-proofing glass. Is the problem corrected?	YES	End.
Photosensitive drum	6		NO	Replace the drum unit.

2 The copy is too light (including solid black areas).

Cause		Step	Check	Yes/No	Action
		1	Perform the Image Adjustment Basic Procedure. Is the problem corrected? Check to make sure that the pattern print is placed correctly when executing FUNCTION>DENS>PD-ME, DZ-ME.	YES	End.
		2	Turn off the power switch, and open the front door. Is the image on the surface of the photosensitive drum more or less normal?	NO	
Transfer	Transfer roller unit	3	Is the transfer roller unit fully inserted?	NO	Insert the transfer roller unit fully.
		4	Is leakage noted in the transfer roller unit?	YES	Check the transfer roller unit.
		5	Check the transfer charging roller for dirt, cracks, and scratches.	YES	Replace the transfer roller.
		6	Are the position and the condition of the transfer charging roller locking spring correct?	NO	Correct the spring position, or replace the spring.
	Copy paper	7	Try fresh (out of package) copy paper. Is the problem corrected?	YES	• The paper may be moist. Instruct the user on the correct method of storage. • Explain to the user that the use of paper not recommended by Canon may not bring about the best results.
	Transfer guide	8	Set the feeding assembly in feeding position, and measure the resistance between the transfer guide and the base (metal area) of the transfer charging assembly rail with a meter. Is it 0 Ω?	YES	Check to make sure that the transfer guide is not in contact with metal areas of the feeding assembly (e.g., side plate).
	High-voltage cord, High-voltage transformer, DC controller PCB Toner level detecting			NO	1. Check the high-voltage cord for conductivity. (The resistance of the transfer high-voltage cord is about 10 KΩ.) 2. Check the high-voltage transformer on the DC controller PCB.

Cause		Step	Check	Yes/No	Action
Development	Developing assembly	9	Is the developing assembly set correctly? (Are the rolls of the developing assembly in firm contact with the photosensitive drum?)	NO	Set the developing assembly correctly.
	Toner level detecting	10	Is there toner in the developing assembly?	NO	• Check the toner sensor. • Check the connector and the harness for continuity.
Drum unit		11	Replace the drum unit. Is the problem corrected?	YES	End.
Image processor PC, Analog processor PCB		12		NO	Replace the image processor PCB and the analog processor PCB.

Primary charging high-voltage cord resistance: 10 KΩ (approx.)

Separation high-voltage cord (white): 10 KΩ (approx.)

Transfer guide cord resistance: 10 KΩ (approx.)

3 The copy is too light (entirely, considerably).

Cause		Step	Check	Yes/No	Action
		1	Perform the Image Adjustment Basic procedure. Is the problem corrected? Check to make sure that the pattern print is placed correctly when executing FUNCTION>DENS>PD-ME, DZ-ME.	YES	End.
AE adjustment		2	Turn off the power switch in the middle of copying operation, and open the front door. Is the toner image on the surface of the photosensitive drum before transfer more or less normal?	NO	Go to step 5.
Developing assembly		3	Are the rolls of the developing assembly in firm contact with the drum?	NO	Check the developing assembly locking lever and the developing assembly rolls for foreign matter (toner).
Developing assembly driving clutch		4	Is the developing cylinder rotating?	NO	Check the developing assembly drive clutch (e.g., for loose screw).
Development	Transfer roller unit	5	Is the transfer roller unit set correctly?	NO	• Insert the transfer roller unit. • Check the feeding assembly locking
		6	Is leakage noted in the transfer roller unit?	YES	Check the transfer roller unit.
	High-voltage cord, Transfer roller unit	7	Is there conductivity from the compound power supply PCB to the transfer roller unit? (The resistance of the transfer roller high-voltage cord is about 10 KΩ)	NO	• Replace the high-voltage cord. • Check the transfer roller unit.
	High-voltage transformer, DC controller PCB	8		YES	Check the compound power supply PCB and the DC controller PCB.
	Transfer guide	9	Set the feeding assembly in feeding position, and measure the resistance between the transfer guide and the base (metal area) of the transfer charging assembly rail. Is it 0 Ω?		Check to make sure that the transfer guide is not in contact with the metal area of the feeding assembly (e.g., side plate).
	Copy paper	10		NO	Try fresh paper or paper of a different type.

Cause	Step	Check	Yes/No	Action
	11	Is the developing assembly firmly locked to the photosensitive drum? (check if the rolls of the developing assembly are in firm contact with the photosensitive drum.)	YES	Set the developing assembly correctly.
Development			NO	• Check the developing assembly. • Check the developing bias.

4 The copy has uneven density (darker at front).

5 The copy has uneven density (lighter at front).

Cause	Step	Check	Yes/No	Action
Developing assembly	1	Are the developing assembly rolls in firm contact with the photosensitive drum?	NO	Check the developing assembly locking unit..
Scanner	2	Clean the scanning lamp, reflecting plate, mirror, lens, and dust-proofing glass. Is the problem corrected?	YES	End.
Pre-exposure lamp	3	Does the pre-exposure lamp remain on during copying operation?	NO	1.Replace the pre-exposure lamp. 2.Replace the DC controller PCB.
Developing assembly	4	Is the developing cylinder coated with an even layer of toner?	NO	1.Clean the tip of the blade of the developing assembly. (dry wiping) 2.Clean the surface of the developing cylinder. 3.Check to make sure that the toner inside the developing assembly is not uneven.
Fluorescent lamp	5	Has the fluorescent lamp blackened?	YES	Replace the scanning lamp.
Shading	6	Is the halftone area of the PG output uneven?	YES	Replace the drum unit.
Drum cartridge			NO	Execute shading correction once gain (FUNCTION>CCD >**MAN-ADJ**).

6 The copy is foggy (entirely).

Cause	Step	Check	Yes/No	Action
Scanner	1	Clean the scanning lamp, reflecting plate, mirror, lens, and dust-proofing glass. Is the problem corrected?	YES	End.
	2	Perform the Image Adjustment Basic Procedure. Is the problem corrected?	YES	End.
	3	Select COPIER>FUNCTION>DPC>D-GAMMA in service mode, and press the Copy Start key. Is the problem corrected?	NO	Set COPIER>OPTION>BODY>AGS-NON to '1'. If the result is good, keep it to '1' as a temporary measure. However, be sure to provide a permanent measure later, since the image processor PCB, DC controller PCB, or composite power supply PC may have a fault.
Developing assembly	4	Is the developing cylinder insulated from GND of the machine? (Turn off the main power, and disconnect the connector J205 of the composite power supply PCB; then, check continuity between J205-1 and the metal plate of the machine.)	NO	Check the area around the developing cylinder and the developing connector.
High-voltage system	5	Is the PG solid white output foggy?	YES	Check the high-voltage system. (If NG, execute shading correction once again; execute MAN-ADJ.)
Composite power supply (J208)	6	Is the connector J208 on the composite power supply PCB connected securely?	NO	Connect it securely.
ADJUST>DE-OFST	7	Adjust the setting of ADJUST>DE-OFST in service mode within +30 of the factory setting. Is the problem corrected?	YES	End.
Developing bias	8	Replace the composite power supply PCB. Is the problem corrected?	YES	End.
DC controller PCB			NO	Replace the drum unit.

7	**The copy is foggy (vertically).**
8	**The copy has black lines (vertical, fuzzy, thick).**

Cause	Step	Check	Yes/No	Action
Primary charging roller	1	Clean the charging roller in user mode. Is the problem corrected?	YES	End.
Scanner	2	Clean the mirror, lens, and dust-proofing glass. Is the problem corrected?	YES	End.
Developing assembly	3	Is the surface of the developing assembly coated with an even layer of toner?	NO	1.Check the edge of the blade of the developing assembly. 2.Dry wipe the surface of the developing cylinder.
Photosensitive drum	4	Are there scratches in the peripheral direction of the surface of the photosensitive drum?	YES	Replace the drum unit.
External light			NO	Check the photosensitive drum to make sure it is not subjected to external light.

9 The copy has black lines (vertical, fine).

Cause	Step	Check	Yes/No	Action
Exposure system	1	Generate a halftone test print in service mode. Enter '5' to COPIER>PG>TYPE. Does the output image have black lines?	NO	The exposure system may be faulty. Clean it.
Primary charging assembly	2	Clean the primary charging roller in user mode. Is the problem corrected?	YES	End.
Photosensitive drum	3	Are there scratches in the peripheral direction of the photosensitive drum? • Wipe the black lines on the surface of the photosensitive drum with a cloth coated with toner. Can they be removed?	NO	Replace the drum unit. • If scratches are noted, be sure to investigate the cause.
Fixing assembly	4	Are there scratches in the peripheral direction of the fixing roller?	YES	Replace the fixing roller.
			NO	Check the fixing assembly inlet for dirt.

10	**The copy has white spots (vertical).**
11	**The copy has white lines (vertical).**

Cause	Step	Check	Yes/No	Action
Exposure system	1	Generate a halftone test print in service mode. Enter '4' to COPIER>PG>TYPE. Are there black lines on the output?	NO	Go to step 7.
Transfer charging roller, Separation static eliminator	2	Is the transfer charging roller or the separation static eliminator soiled or coated with foreign matter?	YES	Clean the transfer charging roller or the separation static eliminator. If the problem still is not corrected, replace the transfer charging assembly or the static eliminator.
Developing assembly	3	Is the surface of the developing cylinder coated with an even layer of toner?	NO	Check the edge of the blade of the developing assembly. If there is no not toner in the developing assembly, see "The Add Toner message fails to turn on."
Fixing assembly	4	Are there scratches in the peripheral direction of the surface of the upper fixing roller?	YES	• Replace the upper fixing roller. • Clean the separation claw. • Check to see if the separation claw is mounted correctly.
Fixing assembly inlet	5	Is there dirt or foreign matter on the fixing assembly inlet?	YES	Clean it.
Photosensitive drum	6	Are there scratches in the peripheral direction of the photosensitive drum?	YES	Replace the drum unit. • Be sure to find out the cause of the scratches.
Dust-proofing glass	7	Clean the dust-proofing glass. Is the problem corrected?	YES	End.
Exposure system	8	Clean the standard white plate and the mirrors. Is the problem corrected?	YES	End.
Standard white plate			NO	Change the setting of ADJUST>ADJ-XY>ADJ-S in service mode to change the position of shading measurement.

12 The copy has white spots (horizontal).

Cause	Step	Check	Yes/No	Action
Exposure system	1	Generate a halftone test print in service mode. Enter '4' to COPIER>PG>TYPE. Are there black lines on the output?	NO	Go to step 4.
Developing assembly	2	Is the problem noted at intervals of about 35 mm?	YES	• Clean the developing rolls. • Dry wipe the surface of the developing cylinder. • If there are scratches on the surface of the developing cylinder, replace the developing cylinder.
Drum unit	3	Is the problem noted at intervals of about 94 mm?	YES	• Clean the drum. • If there are scratches on the surface of the drum, replace the drum unit.
Paper	4	Try fresh paper. Is the problem corrected?	YES	The paper may be moist. Instruct the user on the correct method of storing paper.
Transfer charging assembly	5	Are there white spots on the photosensitive drum during copying operation?	NO	Check the transfer charging assembly for leakage.
Developing bias	6		YES	Check the developing bias.
Dust-proofing glass	7	Clean the dust-proofing glass. Is the problem corrected?	YES	End.

13 The back of the copy is soiled.

Cause	Step	Check	Yes/No	Action
Exposure system	1	Turn off the main power switch while paper is moving through the feeding assembly. Is the back of the paper soiled at this time?	NO	Go to step 5.
Transfer guide assembly	2	Replace the drum causing the problem (e.g., black lines). Is the back soiled?	YES	Clean the transfer guide and the magnet plate.
Transfer guide bias Transfer guide Magunet plate	3	Is the voltage between the transfer guide (+) and the machine side plate (-) about -100 to -400 V?	NO	• Check the transfer guide bias connector. • Clean the magnet plate. • Clean the transfer guide.
Developing assembly, Registration roller	4	Is the problem noted at intervals of about 50 mm?	YES	• Clean the transfer guide. • Check the developing assembly for leakage of toner. • Clean the magnet plate. • Clean the bottom of the developing assembly.
Drum cleaner			NO	• Clean the feeding assembly. • Clean the transfer guide. • Clean the magnet plate. • Check the drum cleaner assembly for leakage of toner.
Transfer charging roller	5	Execute roller cleaning in user mode. Is the problem corrected?	YES	End.
Fixing assembly	6	Are the take-up mechanism of the fixing cleaning belt and the cleaning mechanism of the upper roller normal?	NO	• Check the cleaning belt take-up mechanism. • Clean the fixing roller. • Clean the fixing assembly inlet guide.
			YES	• Replace the transfer charging roller.

14 The copy has poor fixing.

Cause		Step	Check	Yes/No	Action
		1	Does the problem occur immediately after the machine is turned on in the morning?	NO	Go to step 3.
		2	Is the paper of poor fixing characteristic (e.g., thick paper)?	YES	Enter '1' to OPTION>BODY >TEMPCON2 in service mode. In addition, inform the user of the following: 1) The cassette holding thick paper must be specified as the special cassette. 2) The specified cassette must be selected for the Thick Paper icon: 🗋
Fixing assembly	Fixing roller	3	Is the problem noted vertically?	YES	If there are scratches on the fixing roller, replace the roller.
	Heater	4	Does the heater turn on when power is turned on?	NO	See "The fixing heater fails to operate."
	Lower roller	5	Is the lower roller pressure (nip) as indicated?	NO	Adjust the lower roller pressure.
	Thermistor	6	Is the reading of COPIER>DISPLAY>ANALOG>FIX-C in service mode about 185°C (control temperature)?	NO	If the resistance of the thermistor shows an appreciable deviation, check the wiring and replace the thermistor as necessary: Main: about 1000 to 1400 KΩ Sub: about 40 to 50 KΩ
Paper		7	Is the paper of a type recommended by Canon?	NO	Try recommended paper. If the results are good, advise the user to use recommended paper.
DC controller PCB		8	Replace the DC controller PCB. Is the problem corrected?	YES	End.
Image processor PCB				NO	Replace the image processor PCB.

15	**The copy has leading edge displacement.**
16	**Leading edge displacement (large margin)**
17	**Leading edge displacement (no margin)**

Cause	Step	Check	Yes/No	Action
	1	Is the feeder used?	YES	Correct the leading edge displacement according to the Service Manual of the feeder.
Original	2	Is the original placed correctly?	NO	Place it correctly.
Pick-up roller, Feeding roller, Separation roller	3	Has the pick-up, feeding, or separation roller of the cassette holder in question reached the end of its average life?	YES	• Check each roller, and replace if worn.
REGIST	4	Execute ADJUST>FEED-ADJ >REGIST in service mode. Is the problem corrected? (See Note.)	YES	End.
	5	Is the problem noted only when pick-up is from the lower feeding assembly?	YES	Check the rollers of the lower feeding assembly.
Registration roller, Pick-up/ feeding guide			NO	Check and clean the following: • Registration rollers • Pick-up/feeding guide

Note: Make adjustments as follows:
- Generate a PG test pattern (6; solid black).
- Make adjustments so that the leading edge margin is 2.5 ±1.5 mm.
- Keep in mind that a higher setting increases the margin.

18 The copy is blurry.

Cause	Step	Check	Yes/No	Action
Scanner drive cable	1	Is the cable on the cable pulley twisted or frayed while the scanner is moving? Is there foreign matter on the mirror pulley assembly?	YES	• Re-route the cable. • Replace the cable • Remove the foreign matter.
Scanner rail	2	Move the No. 1 mirror mount slowly by hand. Does it move smoothly?	NO	Clean the surface of the scanner rail with alcohol; thereafter, apply a small amount of lubricant.
Drum drive assembly, Photosensitive drum	3	Is the problem noted at intervals of about 94 mm?	YES	• Check the drum drive assembly. • Check the ends of the drum (area in contact with the developing roll) for scratches and foreign matter.
Developing gear	5	Is the problem noted at intervals of about 35 mm?	YES	Check the developing assembly.
Drum drive assembly, Drum unit			NO	• Check the drum drive assembly. • Replace the drum unit.

19 The copy has horizontal fogging.

Cause	Step	Check	Yes/No	Action
	1	Is the problem noted at the same location on all copies made in Direct?	YES	Go to step 5.
Scanning lamp	2	Does the scanning lamp flicker while moving forward?	YES	• If the scanning lamp is blackened, replace the lamp. • Check the power supply voltage.
Drum cartridge	3	Is the problem noted at intervals of 94 mm?	YES	Replace the drum cartridge.
Wiring	4	Is the wiring from the scanning lamp to the composite power supply PCB and to the power supply normal?	NO	Correct the wiring.
Developing assembly	5	Is the coating of toner on the surface of the developing cylinder normal?	NO	Check the developing bias.
Scanning system	6	Make a copy in Reduce. Is the problem noted at a location different from that on a copy made is Direct?	YES	Check the scanning system.
Feeding system			NO	Check the feeding system.

20 The copy has poor sharpness.

Cause	Step	Check	Yes/No	Action
Copyboard glass	1	Is there oil or the like on the copyboard glass? Is there foreign matter on the copyboard glass cross-member?	YES	Clean the copyboard glass.
Scanning system	2	Clean the scanning lamp, reflecting plate, mirror, lens, and dust-proofing glass. Is the problem corrected?	YES	End.
Mirror	3	Is the horizontal ratio of copies made in Direct as indicated?	NO	Adjust the distance between No. 1 and No. 2 mirrors.
Developing bias	4	Are the connection and the continuity of the developing bias high-voltage cable normal? (For the developing bias cable, the resistance between the terminal on the composite power supply PCB and the terminal of the developing assembly must be about 10 KΩ.)	NO	Check the connection, and replace the cable if necessary; if the result is not good, 1) Replace the composite power supply PCB. 2) Replace the DC controller PCB.
Drum unit	5	Replace the drum unit. Is the problem corrected?	YES	End.
Transfer charging assembly			NO	Check the transfer charging system.

21 The copy is blank.

Cause	Step	Check	Yes/No	Action
Developing assembly	1	Is the developing assembly locked to the photosensitive drum during copying operation?	NO	Check the locking mechanism of the developing assembly.
Developing assembly drive assembly	2	Is the developing cylinder rotating during copying operation?	NO	Check the drive mechanism of the developing assembly.
	3	Is the image of test prints (1 through 8 of PG>TYPE) normal?	YES	Go to step 10.
Transfer charging assembly	4	Is the transfer charging assembly fully inside the machine?	NO	Push the assembly fully inside the machine.
	5	Is leakage noted in the transfer charging assembly?	YES	Check the transfer charging assembly.
Transfer high-voltage cord	6	Is the connection of the transfer high-voltage cord normal? Is there continuity on the transfer high-voltage cord? (The resistance of the transfer high-voltage cord must be about 10 KΩ)	NO	Re-connect it. Replace the transfer high-voltage cord.
DC controller PCB	7	Replace the DC controller PCB. Is the problem corrected?	YES	End.
DC controller PCB	8	Replace the composite power supply PCB. Is the problem corrected?	YES	End.
Power supply to CCD PCB	9	Is there 15 VDC at J304-1 and about 5 VDC at J304-4 of the CCD PCB?	NO	Check the wiring; if normal, replace the low-voltage power supply PCB.
Wiring (CCD PCB to image processor PCB)	10	Is the connector of the flat cable locked? Is it inserted correctly?	NO	Re-connect it.
Laser unit	11	Turn off the power switch during development, and slide out the drum unit. Is the image on the drum normal?	NO	Replace the laser unit.
Drum unit			YES	Replace the drum unit.

22 The copy is solid black.

Cause	Step	Check	Yes/No	Action
Scanning lamp	1	Does the scanning lamp remain on during copying operation?	NO	See "The scanning lamp fails to turn on."
Margin	2	Is there a margin on copies made normally?	YES	Go to step 6.
			NO	Go to step 3.
Drum	3	Is the drum set correctly? (Is it fully pushed in?)	NO	Correct the mounting.
Primary charging assembly	4	Are the connection and continuity (connectors and harness) from J205-3 on the composite power supply PC to the primary charging assembly normal? (The resistance on the primary charging high-voltage cord must be about 10 KΩ.)	NO	Correct the connection.
Mirror	5	Generate test prints (1 through 8 of PG>TYPE). Is the image on the photosensitive drum normal?	NO	Go to step 7.
DC controller PCB	6	Is the output (HVPDC*) of J103-B4 (+) of the DC controller PCB 0 V during copying operation?	NO	Replace the DC controller PCB.
Composite power supply PCB			YES	Replace the composite power supply PCB.
Image processor PCB	7	Execute FUNCTION>MISC-P>IP-CHK in service mode. Does it end in 'OK'?	NO	Replace the image processor PCB.
CCD unit			YES	Check the wiring of the flat cable; if normal, replace the CCD unit.

23 The copy has black or white dots after replacement of the drum.

Cause	Step	Check	Yes/No	Action
	1	Execute FUNCTION>DPC>D-GAMAM in service mode, and make a copy of the NA-3 Chart. Is the copy image normal?	YES	End.
	2	Set '1' to OPTION>BODY>PRIAC-SW in service mode. Make a copy of the NA-3 Chart. Is the copy image normal?	YES	End.
Drum cartridge			NO	Replace the drum cartridge.

IV. TROUBLESHOOTING MALFUNCTION

1. Before starting the troubleshooting work, check the error history using COPIER>DISPLAY>**ERR** in service mode. (E202 is indicated only on the Error History screen, and cannot be checked without executing this service mode.)
2. For troubleshooting the feeder, sorter, or cassette pedestal, refer to its respective Service Manual.
3. If E000, E001, E002, E003, E004, or E717 is indicated, clear the error by executing the following before taking corrective action:
   FUNCTION>CLEAR>**ERR**.
4. The connectors on the machine's PCBs do not allow insertion of meter probes. Obtain a probe extension (FY9-3038/3039; see p. 14-29).

1 E000 (The Fixing Temperature Failure message turns on.)

Cause	Step	Check	Yes/No	Action
	1	Clear the error in service mode.		
Relay connector (J426; thermistor)	2	Is the connection of the connector J426 normal?	NO	Re-connect the connector.
Thermistor	3	Wait until the fixing assembly has cooled adequately; then, disconnect J426, and measure the resistance of the thermistor. Is the reading as follows? (The resistance varies depending on temperature. Use the following for reference.) • J426 (white, TH1) about 1000 to 1400 kΩ • J426 (black, TH2) about 40 to 50 kΩ	NO	Replace the thermistor.
Thermistor	4	Disassemble the fixing assembly, and check to see if the thermistor is mounted correctly. Is the thermistor in contact with the upper fixing roller correctly?	NO	Re-mount the thermistor.
heater	5	Disconnect J496, and measure the resistance on the heater side. Is it as follows? between J496-1 and -3: several Ω between J496-2 and -3: several Ω	NO	Replace the heater
Thermal switch	6	Is there continuity on the thermal switch? Is it positioned correctly?	NO	Replace or mount the thermal switch correctly.
Composite power supply PCB	7	Is a specific voltage supplied by the composite power supply? between J201-1 and -4: about 100 VAC	NO	Replace the composite power supply PCB.
Relay connector	8	Are the relay connector (J498, J447) connected correctly?	NO	Re-connect them.

SSR	9	Are 6-7 and 7-8 of the SSR shorted?	YES	Replace the SSR. At this time, check to make sure that the harness around the SSR is not trapped.
Relay	10	Replace the relay. Is the problem corrected?	YES	Replace the relay.
DC controller PCB	11		YES	End.
Image processor PCB			NO	Replace the image processor PCB.

2 E001 (The Fixing Temperature Overheat message turns on.)

Cause	Step	Check	Yes/No	Action
	1	Clear the error in service mode.		
Thermistor	2	Wait until the fixing assembly has cooled sufficiently; then, disconnect J426, and measure the resistance of the thermistor. Is the reading as follows? J426 (white harness; TH1):about 0 Ω J426 (black harness; TH2):about 0Ω	YES	Replace the thermistor unit.
SSR	3	Are the 6-7 and 7-8 of the SSR shorted?	YES	Replace the SSR.
DC controller PCB	4	Replace the relay. Is the problem corrected?	YES	End.
Image processor PCB	5	Replace the DC controller PCB. Is the problem corrected?	NO	Replace the image processor PCB.

3 E002, E003 (The Fixing Temperature Error message turns on.)

Cause	Step	Check	Yes/No	Action
	1	Clear the error in service mode.		
	2	When the machine has warmed up, does any of the following apply? • The fixing heater fails to operate. • E000 is indicated.	YES	See the appropriate descriptions.
Thermistor	3	Wait until the fixing assembly has cooled sufficiently; then, disconnect J426, and measure the resistance of the thermistor. Is the reading as follows? J426 (white harness; TH1): about 0 Ω J426 (black harness; TH2): about 0 Ω	YES	Replace the thermistor unit.
Wiring	4	Is the wiring from the connector J114 on the DC controller PCB to the thermistor good?	NO	Correct the wiring.
Thermal switch	4	Replace the thermal switch. Is the problem corrected?	YES	End.
Relay	5	Replace the relay. Is the problem corrected?	YES	End.
DC controller PCB	6	Replace the DC controller PCB. Is the problem corrected?	YES	End.
Image processor PCB	7		NO	Replace the image processor PCB.

4 E004 (The SSR has a short circuit, or the heater relay has an error.)

Cause	Step	Check	Yes/No	Action
	1	Clear the error in service mode.		
Fixing heater	2	Does the fixing heater turn on immediately after power-on?	NO	See "The fixing heater fails to turn on." If E000 or E002 occurs, see its respective descriptions. If E004 turns on once again, go to step 3.
Wiring	3	Does the wiring between the SSR, relay, and DC controller PCB have a fault?	YES	Correct the wiring.
SSR	4	Is 6-7 and 7-8 of the SSR shorted?	YES	Replace the SSR.
DC controller PCB	5	Replace the DC controller PCB. Is the problem corrected?	YES	End.
Image processor PCB	6		NO	Replace the image processor PCB.

5 E005 (The fixing cleaning belt has run out.)

Cause	Step	Check	Yes/No	Action
Fixing cleaning belt	1	Is the fixing cleaning belt taken up?	YES	Replace the cleaning belt.
Counter	2	Was the counter reading cleared when the cleaning belt was replaced last time? (COPIER>COUNTER>MISC>FIX-WEB in service mode)	NO	Clear the counter. (Keep this in mind when replacing the cleaning belt next time; see note.)
DC controller PCB			YES	Replace the DC controller PCB.

Note: You can enable or disable the belt replacement message appearing on the User screen in service mode (OPTION>USER>WEB-DISP); at time of shipment, the message is disabled.

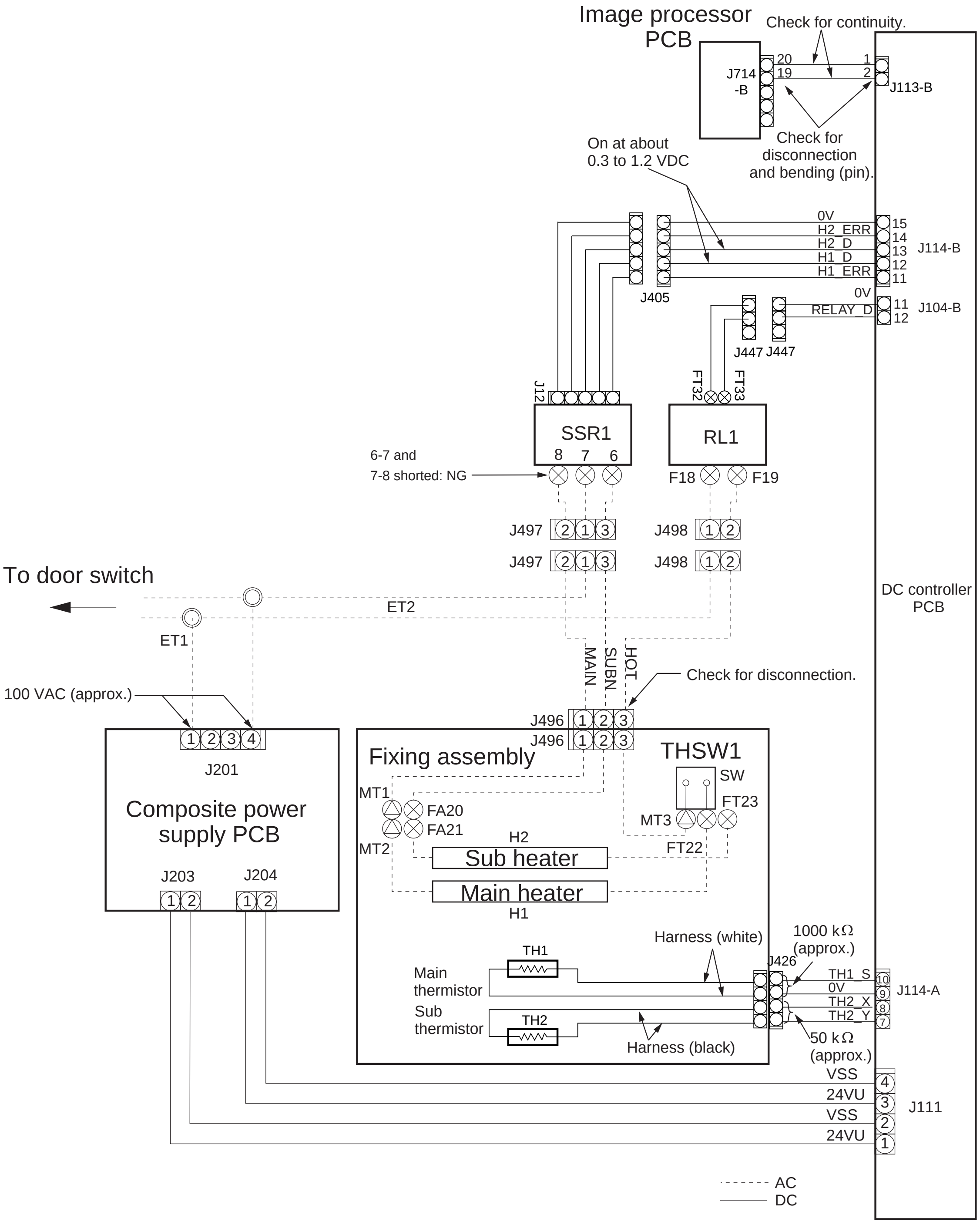


Image processor PCB
Check for continuity.
J714 -B
20
19
1
2
J113-B
Check for disconnection and bending (pin).
On at about 0.3 to 1.2 VDC
0V
H2_ERR
H2_D
H1_D
H1_ERR
15
14
13
12
11
J114-B
J405
0V
RELAY_D
11
12
J104-B
J447
J447
J12
FT32
FT33
SSR1
8 7 6
RL1
6-7 and 7-8 shorted: NG
F18
F19
J497
J498
To door switch
ET2
ET1
DC controller PCB
MAIN
SUBN
HOT
Check for disconnection.
100 VAC (approx.)
J496
J201
Composite power supply PCB
J203
J204
Fixing assembly
THSW1
SW
FT23
MT1
FA20
FA21
MT3
MT2
H2
FT22
Sub heater
Main heater
H1
Harness (white)
1000 kΩ (approx.)
J426
TH1
Main thermistor
Sub thermistor
TH2
TH1_S
0V
TH2_X
TH2_Y
10
9
8
7
J114-A
Harness (black)
50 kΩ (approx.)
VSS
24VU
VSS
24VU
J111
AC
DC

Figure 14-401 E000, E001, E002, E003, E004

6 E010 (The main motor fails to rotate normally.)

Cause	Step	Check	Yes/No	Action
	1	Does the main motor rotate until E010 turns on?	NO	Go to step 5.
Harness, Wiring	2	Are the connectors and wiring around the main motor normal?	NO	Correct the wiring.
Main motor	3	Does the voltage of J102-B12 (M1LCK) on the DC controller PCB change to 0 VDC while the main motor is rotating?	NO	Replace the main motor (main motor driver PCB).
Composite power supply PCB	4	Is 24 VDC generated between J204-3 and -4 on the composite power supply PCB?	NO	Replace the composite power supply PCB.
DC controller PCB	5	Is the voltage of J102-B11 on the DC controller PCB about 5 VDC during WMUP? (normal if 5 V during rotation)	NO	Replace the DC controller PCB.
Harness	6	Is the continuity of the harness between the image processor PCB and the DC controller PCB normal? • J714-A14 to J113-A7 • J714-A16 to J113-A5	YES	Replace the harness.
DC controller PCB, Image processor PCB	7		YES	Replace the DC controller PCB and the image processor PCB.

7 E014 (The fixing motor fails to rotate normally.)

Cause	Step	Check	Yes/No	Action
Connector	1	Is J115 on the DC controller PCB disconnected?	YES	Connect the connector.
DC controller PCB	2	Does the voltage of J115-A7 (M2D) on the DC controller PCB change from about 5 to about 0 VDC while the fixing motor is rotating?	NO	Replace the DC controller PCB.
Fixing motor	3	Does the voltage on J115-A6 (M2LCK) on the DC controller PCB change from about 5 to about 0 VDC while the fixing motor is rotating?	NO	Replace the fixing motor PCB.
Fixing cleaning belt	4	Is the fixing cleaning belt taken up correctly?	YES	Replace the fixing cleaning belt. Clear the counter reading.
Composite power supply PCB	5	Is 24 VDC present between J204-7 and -8 on the composite power supply PCB?	NO	Replace the composite power supply PCB.
Harness	6	Is the continuity of the harness between the image processor PCB and the DC controller PCB normal? • J714-A14 and J113-A7 • J714-A16 and J113-A5	NO	Replace the harness.
DC controller PCB, Image processor PCB			YES	Replace the DC controller PCB and the image processor PCB.

8 E030 (The toner copy counter fails to operate.)

Cause	Step	Check	Yes/No	Action
	1	Check the wring and the connectors. Then, turn off and on the power. Is the problem corrected?	YES	End.
Counter	2	Turn off the main power switch, and disconnect the connector (J9) of the counter. Is the resistance on the counter side about 480 Ω?	NO	Replace the counter.
DC controller PCB			YES	Replace the DC controller PCB.

9 E032 (The copy data controller counter has a fault.)

Cause	Step	Check	Yes/No	Action
Connector	1	Are the connectors of the communication cable between the copy data controller and the machine connected correctly?	NO	Correct the connection.
Communication cable	2	Does the communication cable from the copy data controller to the machine have an open circuit?	NO	Replace the communication cable.
Copy data controller	3	Replace the copy data controller. Is the problem corrected?	YES	Replace the copy data controller.
Image processor PCB			NO	Replace the image processor PCB.

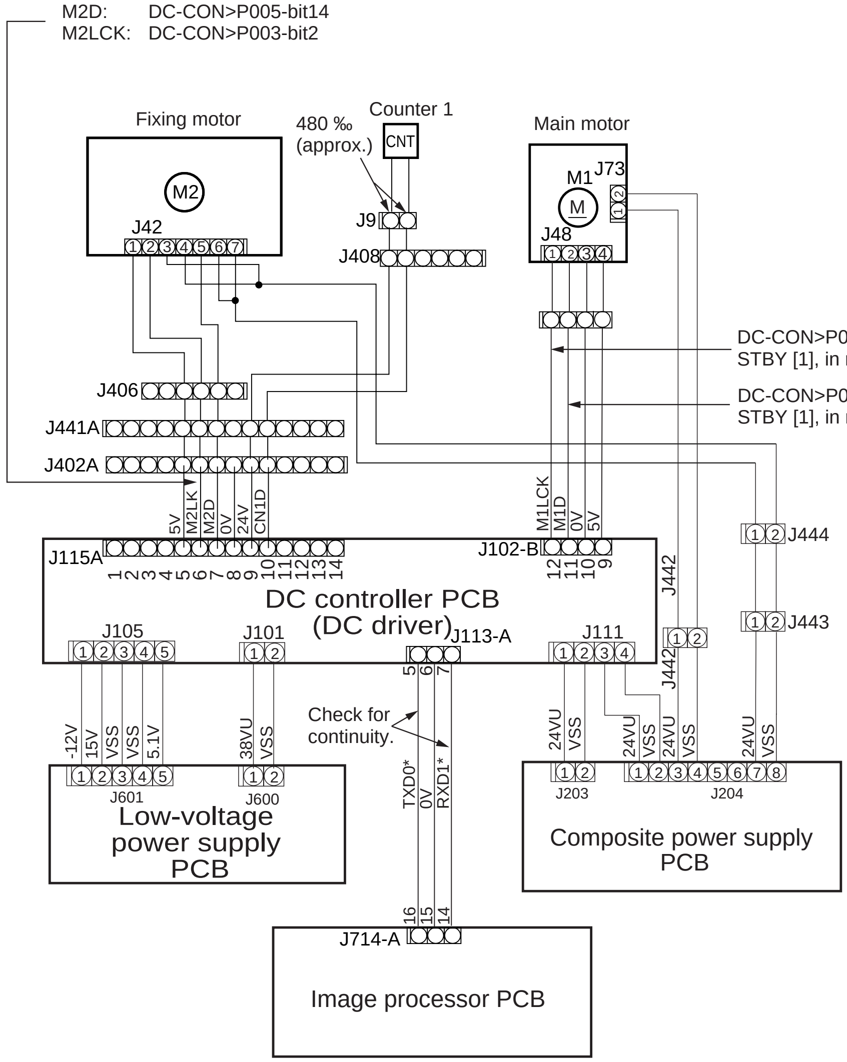

M2D: DC-CON>P005-bit14
M2LCK: DC-CON>P003-bit2
Fixing motor
M2
J42
480 ‰ (approx.)
Counter 1
CNT
J9
J408
Main motor
M1
M
J73
J48
DC-CON>P003-bit0 STBY [1], in rotation [0]
DC-CON>P005-bit0 STBY [1], in rotation [0]
J406
J441A
J402A
5V
M2LK
M2D
0V
24V
CN1D
M1LCK
M1D
0V
5V
J444
J115A
J102-B
J442
DC controller PCB (DC driver)
J105
J101
J113-A
J111
J443
J442
-12V
15V
VSS
VSS
5.1V
38VU
VSS
Check for continuity.
24VU
VSS
24VU
VSS
24VU
VSS
24VU
VSS
J601
J600
TXD0*
0V
RXD1*
J203
J204
Low-voltage power supply PCB
Composite power supply PCB
J714-A
Image processor PCB

Figure 14-402 E010, E014, E030

10 E043

<table>
<tr><th>Cause</th><th>Step</th><th>Check</th><th>Yes/No</th><th>Action</th></tr>
<tr><td>Side deck driver PCB</td><td>1</td><td>Is there continuity between the following connectors on the side deck driver PCB?
<table>
<tr><th>Signal</th><th colspan="2">Connectors</th></tr>
<tr><td>38VU</td><td>J105-1</td><td>J101-1</td></tr>
<tr><td>0VU</td><td>J105-2</td><td>J101-2</td></tr>
</table></td><td>NO</td><td>Replace the side deck driver PCB.</td></tr>
<tr><td>Side deck driver PCB</td><td>2</td><td>Replace the side deck driver PCB. Is the problem corrected?</td><td>YES</td><td>End.</td></tr>
<tr><td>Deck main motor (M101)</td><td rowspan="2">3</td><td rowspan="2">Replace the deck main motor (M101) of the side paper deck. Is the problem corrected?</td><td>YES</td><td>End.</td></tr>
<tr><td>Image processor PCB (machine side)</td><td>NO</td><td>Check the harness from the machine's IP PCB to the motor; if normal, replace the IP PCB.</td></tr>
</table>

11 E051 (The horizontal registration home position detection mechanism has a fault.)

Cause	Step	Check	Yes/No	Action
Sensor flag	1	Does the horizontal registration sensor flag move freely?	NO	Remove the foreign matter. Check the spring.
DC controller PCB	2	Move the horizontal registration sensor. Does the reading of COPIER>I/O>DC-CON>P004-bit 11 change from '1' to '0'? (if I/O=0 while detecting the trailing edge of paper)	NO	Check the wiring; if not normal, check the sensor output on the DC controller PCB. If the signal line output is absent when the flag is moved, replace the sensor. If the signal line output is present, replace the DC controller PCB.
Horizontal registration motor wiring	3	Check the wiring between the horizontal motor and the DC controller PCB. Is the problem corrected?	YES	End.
Fuse (DC controller PCB)	4	Is there continuity in the FU200 on the DC controller PCB?	NO	Replace the DC controller PCB.
Horizontal registration motor	5	Is the horizontal registration motor operating while pick-up is from the lower feeding assembly?	YES	Replace the horizontal registration motor.
DC controller PCB			NO	Replace the DC controller PCB.

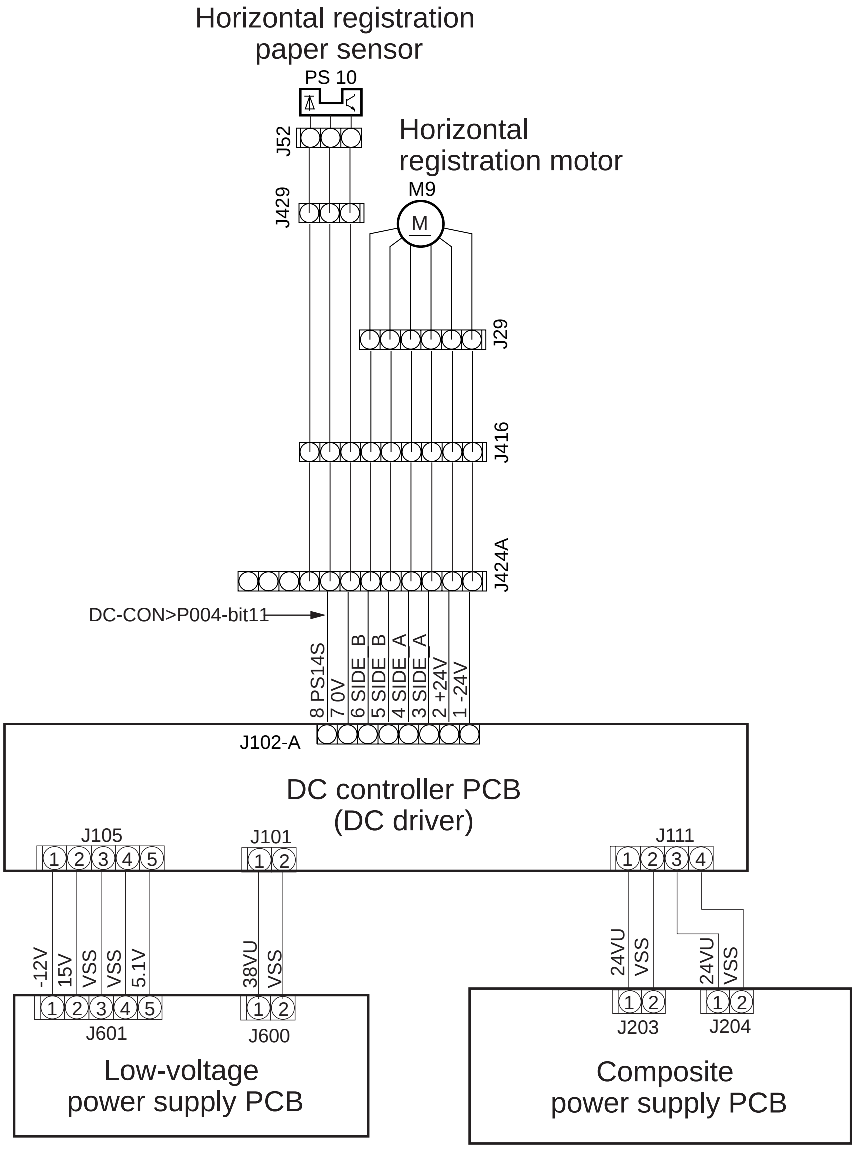

Horizontal registration paper sensor
PS 10
J52
J429
Horizontal registration motor
M9
M
J29
J416
J424A
DC-CON>P004-bit11
8 PS14S
7 0V
6 SIDE_B
5 SIDE_B
4 SIDE_A
3 SIDE_A
2 +24V
1 -24V
J102-A
DC controller PCB (DC driver)
J105
J101
J111
1 2 3 4 5
1 2
1 2 3 4
-12V
15V
VSS
VSS
5.1V
38VU
VSS
24VU
VSS
24VU
VSS
J601
J600
J203
J204
Low-voltage power supply PCB
Composite power supply PCB

Figure 14-403 E051

12 E064 (The high-voltage output has a fault.)

Cause	Step	Check	Yes/No	Action
Contact	1	Are the contacts of the primary charging roller, developing assembly, and transfer charging roller in contact with their respective contacts of the copier?	NO	Clean and correct the contacts; if the problem cannot be corrected, go to step 0.
Service mode	2	Is the reading of COPIER>ADJUST>HV-PRI outside the indicated range?	YES	Enter the value indicated on the service label. Turn off and then on the power; if the problem still occurs, go to step 3.
DIMM (for DC-PC)	3	Disconnect and then connect the DIMM for the DC-CPU. Is the problem corrected?	YES	End.
High-voltage cable	4	Is the resistance of the high-voltage cable as indicated? • Primary/transfer: about 10 KΩ (The resistance of the development cable is about 10 KW when the resistance in the middle is included.)	NO	Replace the high-voltage cable.
Harness	5	Is the continuity of the following harnesses between the DC controller PCB and the composite power supply PCB normal? • J103-A1 to J209-A12 • J103-A3 to J209-A10 • J103-A6 to J209-A7 • J103-A7 to J209-A6	NO	Replace the harness.
Composite power supply PCB, DC controller PCB, Image processor PCB			YES	Replace the composite power supply PCB, DC controller PCB, and image processor PCB.

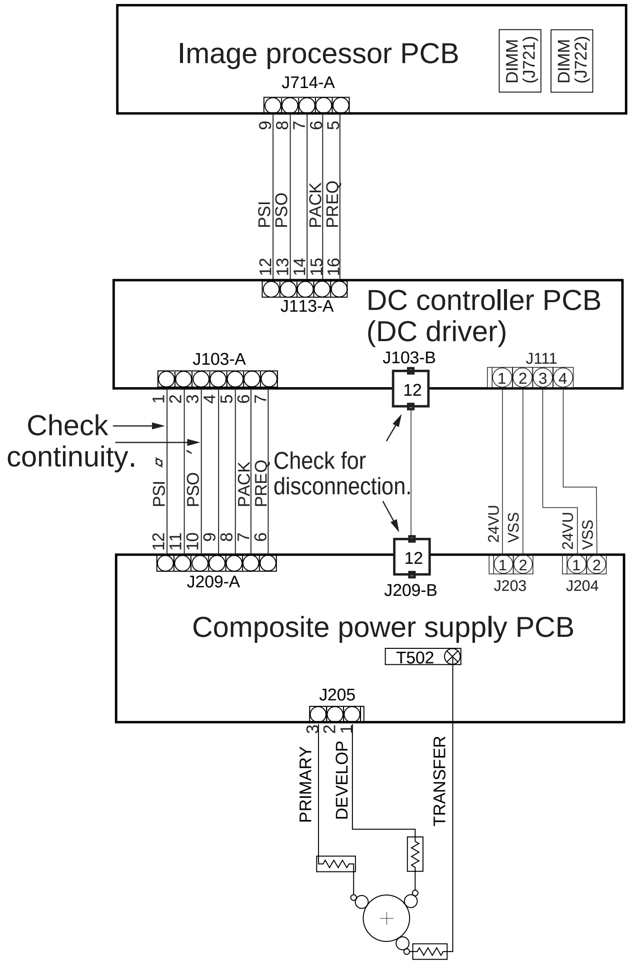


Image processor PCB
DIMM (J721)
DIMM (J722)
J714-A
9 8 7 6 5
PSI
PSO
PACK
PREQ
12 13 14 15 16
J113-A
DC controller PCB (DC driver)
J103-A
J103-B
J111
1 2 3 4
12
1 2 3 4 5 6 7
PSI
PSO
PACK
PREQ
12 11 10 9 8 7 6
24VU
VSS
24VU
VSS
1 2
J203
1 2
J204
J209-A
12
J209-B
Composite power supply PCB
T502
J205
3 2 1
PRIMARY
DEVELOP
TRANSFER

Check continuity.

Check for disconnection.

Figure 14-404

13 E100 (The beam detection mechanism has an error.)

Cause	Step	Check	Yes/No	Action
Contact	1	Is any connector between the BD PCB, image processor PCB, CCD PCB, or the laser diver PCB disconnected? (particularly, between BD and IP)	YES	Correct the connection.
BD harness, BD harness wiring	2	Is the continuity of the harness between the BD PCB and the image processor PCB normal? In addition, check to make sure that the BD harness is not connected to the light-receiving face of the BD PCB.	NO	Replace the harness. If the BD harness is connected to the BD harness, correct the wiring.
Flat cable	3	Check the flat cable between the CCD PCB and the image processor PCB for continuity. Is there continuity? • J301-2 and J706-39 (SYNC signal) • J301-4 and J706-37 (SYNC signal)	NO	Replace the flat cable. During replacement, be sure to lock the connectors.
CCD PCB	4	Replace the CCD PCB. Is the problem corrected?	YES	End.
Image processor PCB	5	Replace the image processor. Is the problem corrected?	YES	End.
BD PCB			NO	Replace the BD PCB.

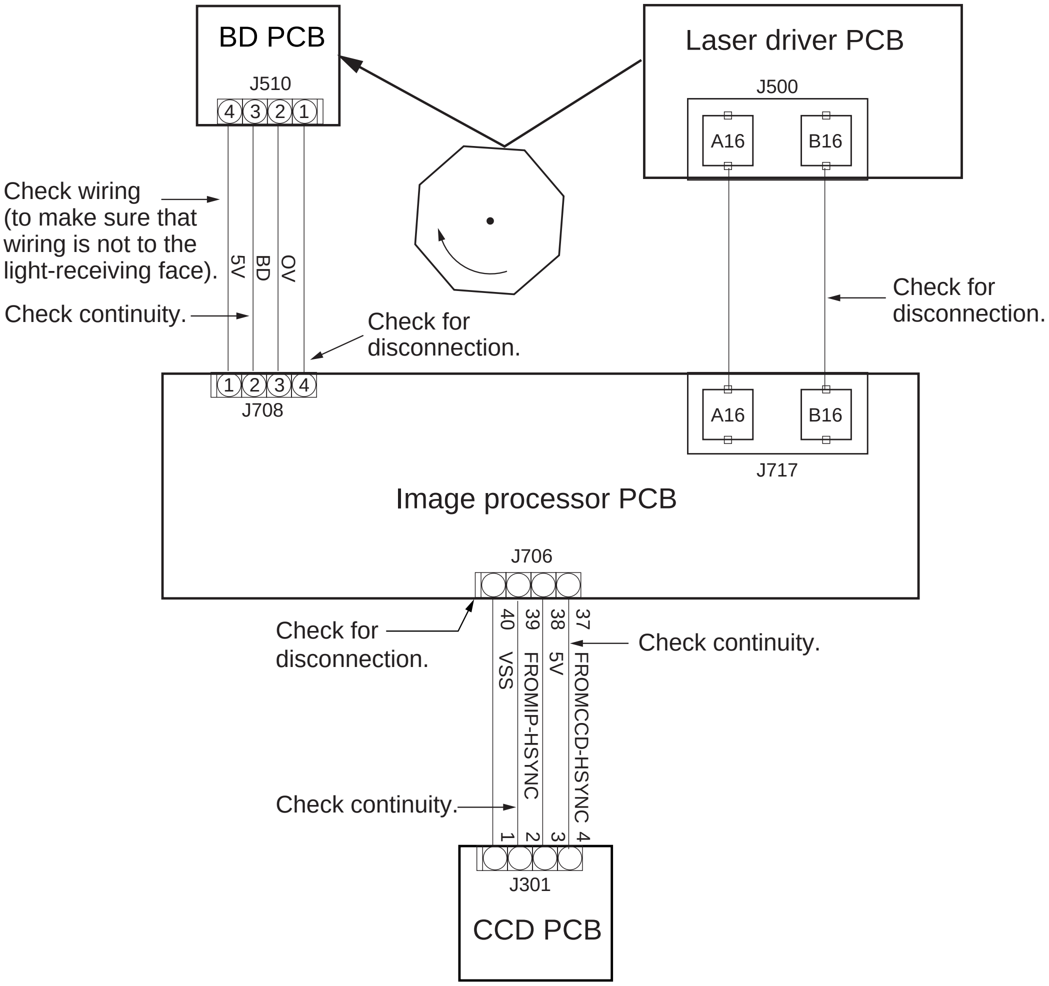

BD PCB
J510
4 3 2 1
Laser driver PCB
J500
A16
B16
Check wiring (to make sure that wiring is not to the light-receiving face).
5V
BD
OV
Check continuity.
Check for disconnection.
Check for disconnection.
1 2 3 4
J708
A16
B16
J717
Image processor PCB
J706
Check for disconnection.
40 VSS
39 FROMIP-HSYNC
38 5V
37 FROMCCD-HSYNC
Check continuity.
Check continuity.
1 2 3 4
J301
CCD PCB

Figure 14-405 E100

14 E110 (The laser scanner motor fails to rotate normally.)

Cause	Step	Check	Yes/No	Action
Contact	1	Check the wiring. Is the problem corrected?	YES	End.
	2	Operate any keys while in standby. Is the rotation sound of the scanner motor heard?	YES	Go to step 5.
Laser scanner motor driver PCB, Laser scanner unit	3	Is the laser scanner motor driver PCB supplied with power? • J445-1 (38 VDC)	YES	Replace the laser scanner driver PCB and the laser scanner unit.
Low-voltage power supply PCB	4		NO	Replace the low-voltage power supply PCB.
DC controller PCB	5	Does the voltage of J104-A2 (M4D) on the DC controller PCB change from 0 to about 4 or 5 VDC while the scanner motor is rotating? (Enter '1' to the silent mode setting; does it change from about 4 or 5 to 0 V 8 sec after the end of copying?)	NO	Check to make sure that the harness between the DC controller PCB and the image processor PCB has continuity; then, replace the DC controller PCB.
Laser scanner motor PCB	6	Is '1' indicated as the reading of I/O>DC-CON>P003-bit2?	YES	Replace the laser scanner PCB.
DC controller PCB	7	Replace the DC controller PCB. Is the problem corrected?	YES	End.
Image processor PCB			NO	Replace the image processor PCB.

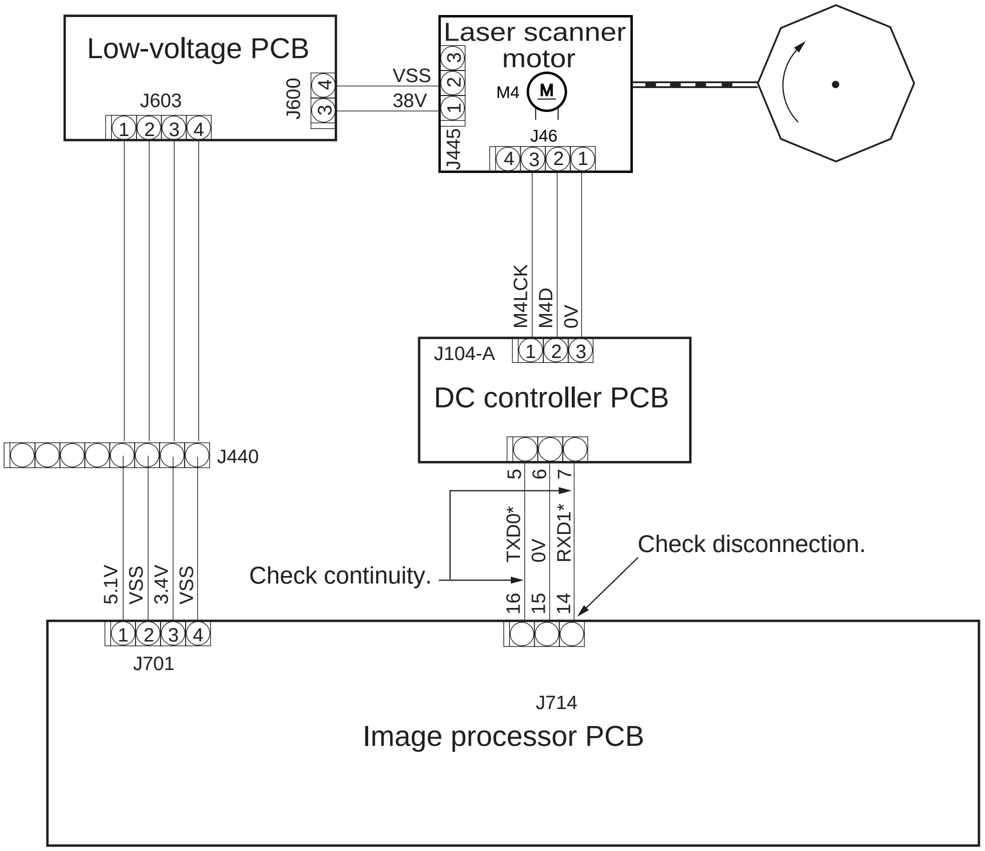
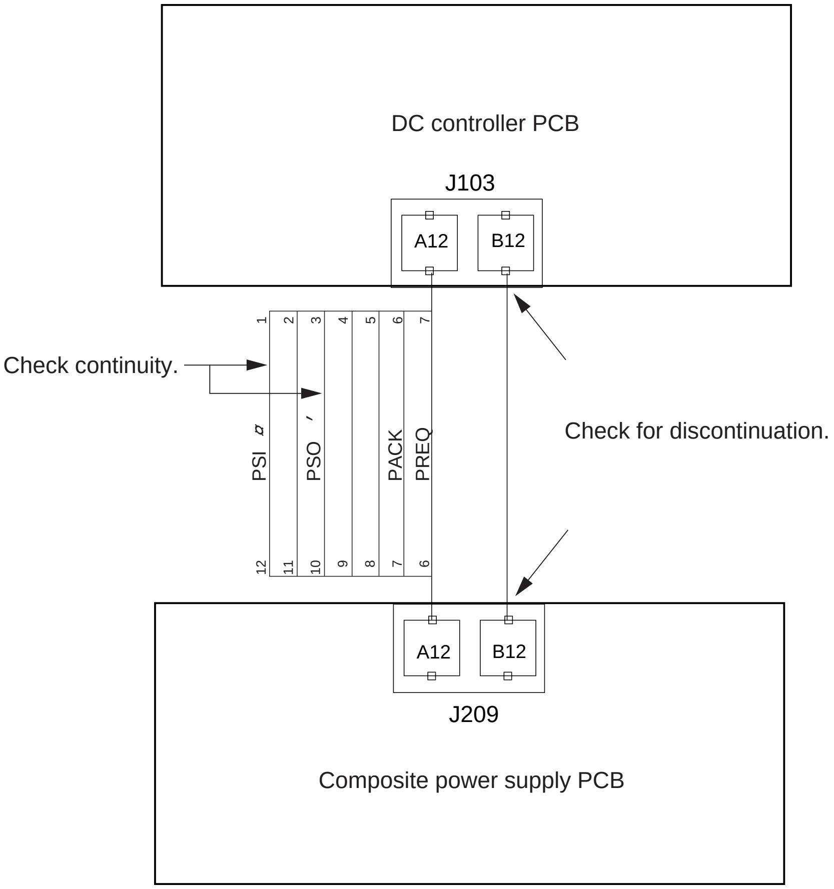

Low-voltage PCB
J603
1 2 3 4
J600
4
3
VSS
38V
Laser scanner motor
3
2
1
J445
M4
M
J46
4 3 2 1
M4LCK
M4D
0V
J104-A
1 2 3
DC controller PCB
J440
5 6 7
TXD0*
0V
RXD1*
Check disconnection.
Check continuity.
5.1V
VSS
3.4V
VSS
16 15 14
1 2 3 4
J701
J714
Image processor PCB

Figure 14-406 E110

15 E191 (The serial communication between DC controller PCB and composite power supply PCB has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the power.	YES	End.
Connector	2	Is the connection of J103 on the DC controller PCB normal? Is the connection of J209 on the composite power supply normal?	NO	Correct the connection.
Harness	3	Is there continuity on the harness between DC controller PCB and composite power supply PCB? • J103-A1 to J209-A12 • J103-A3 to J209-A10 • J103-A6 to J209-A17 • J103-A7 to J209-A16	NO	Replace the harness.
DC controller PCB, Composite power supply PCB			YES	Replace the DC controller PCB and the composite power supply PCB.


DC controller PCB
J103
A12
B12
1
2
3
4
5
6
7
PSI
PSO
PACK
PREQ
12
11
10
9
8
7
6
A12
B12
J209
Composite power supply PCB

Check continuity.

Check for discontinuation.

Figure 14-407 E191

16 E202 (The scanner home position is not detected.)

While this code is on, the keys on the control panel are locked and the Wait message is indicated.

This code is indicated only on the Error History screen in service mode.

Cause	Step	Check	Yes/No	Action
	1	Is the scanner at the home position?	NO	See "The scanner fails to move forward/in reverse."
Scanner home position sensor (PS1)	2	Is 5 VDC present at J112-B5 on the DC controller PCB when the scanner is at PS1?	NO	Check the wiring from DC controller PCB (J112-B5) to PS1; if normal, replace PS1.
	3	Clean the sensor light-receiving section. Is the problem corrected?	NO	Check the wiring from DC controller PCB (J112-B5) to PS1; if normal, replace PS1.
DC controller PCB	4	Is the voltage at J113-A19 about 0 V when PS1S generates 5 VDC?	NO	Check to make sure that the J113 connector is firmly connected; then, replace the DC controller PCB.
Wiring	5	Is there a fault in the wiring from J116 of the DC controller PCB to the scanner motor?	YES	Correct the connection.
Scanner motor (M3)	6	Replace the scanner motor. Is the problem corrected?	YES	Check the harness for continuity; if normal, replace the scanner motor.
DC controller PCB			NO	Replace the DC controller PCB.

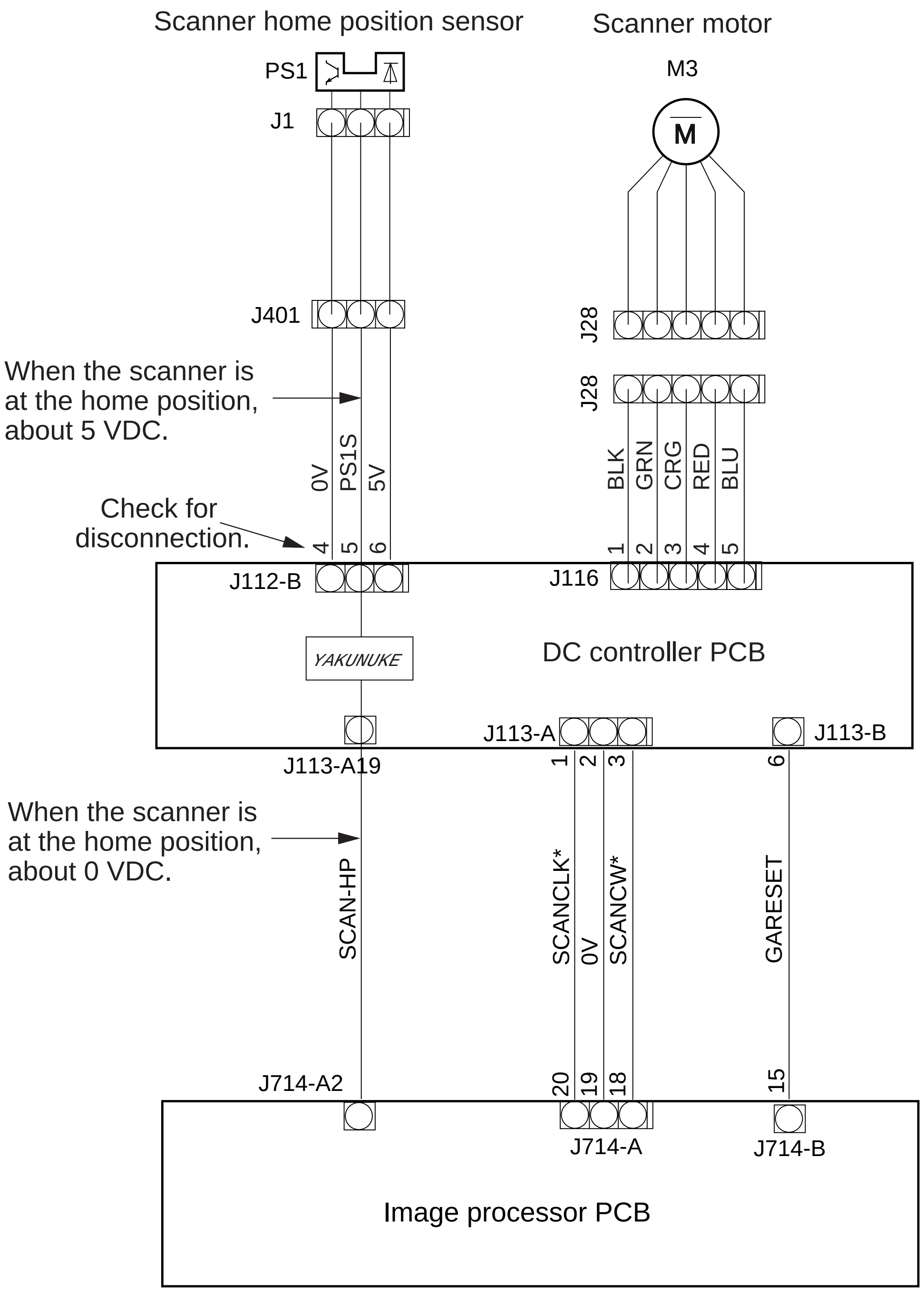

Scanner home position sensor
Scanner motor
PS1
M3
M
J1
J401
J28
J28
When the scanner is at the home position, about 5 VDC.
0V
PS1S
5V
BLK
GRN
CRG
RED
BLU
Check for disconnection.
4
5
6
1
2
3
4
5
J112-B
J116
YAKUNUKE
DC controller PCB
J113-A
J113-B
J113-A19
1
2
3
6
When the scanner is at the home position, about 0 VDC.
SCAN-HP
SCANCLK*
0V
SCANCW*
GARESET
J714-A2
20
19
18
15
J714-A
J714-B
Image processor PCB

Figure 14-408 E202

17 E220 (The scanning lamp turned on in error.)

18 E301 (The scanning lamp intensity is faulty.)

Cause	Step	Check	Yes/No	Action
	1	• Does the scanning lamp turn on when the Copy Start key is pressed? • Execute FUNCTION>MISC-S>SCANLAMP in service mode. Does the lamp turn on?	NO	See "The scanning lamp fail to turn on."
Scanning lamp	2	Are both ends of the scanning lamp blackened?	YES	Replace the scanning lamp.
Connector	3	Is the connection of J706 on the image processor PCB normal?	YES	Correct the connection.
Connector, Sensor	4	Check the wiring between the intensity sensor and the DC controller PCB; then, clean the intensity sensor. Is the problem corrected?	YES	End.
Flat cable connector	5	Is the lock on the flat cable connector (J706) on the image processor PCB engaged?	NO	Lock the connector.
	6	Is there an output of about 0.2 to 0.5 VDC at J112-A5 on the DC controller PCB when the lamp turns on?	YES	Go to step 8.
			NO	Go to step 7.
Intensity sensor, Harness	7	Is there conductivity on the harness between the intensity sensor and the DC controller PCB?	YES	Replace the intensity sensor.
			NO	Replace the harness.
DC controller PBC	8	Is there electrical continuity between J103-A9 and J113-B12 on the DC controller PCB?	NO	Replace the DC controller PCB.
Composite power supply PCB	9	Does the voltage at J113-B12 (change from about 2 to 3 and then to about 1 VDC when the lamp turns on?	NO	Replace the composite power supply PCB.
Harness	10	Is there continuity of the SYNC signal between the CCD PCB and the IP PCB? • J705-39 and J301-2 • J705-37 and J301-4	NO	Replace the harness.
CCD unit	11	Replace the CCD unit. Is the problem corrected?	YES	End.
Image processor PCB			NO	Replace the image processor PCB.

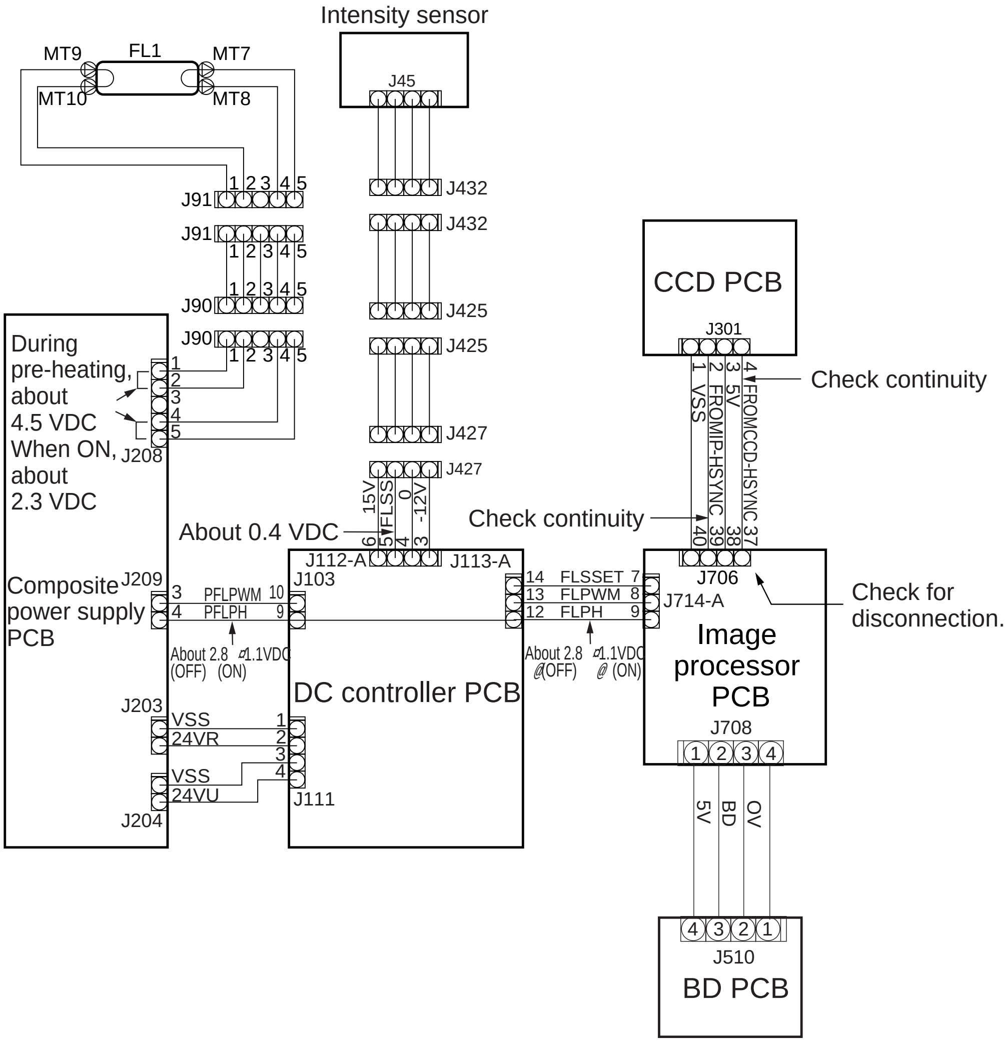

Intensity sensor
J45
MT9
FL1
MT7
MT10
MT8
J91
1 2 3 4 5
J432
J91
J90
J425
CCD PCB
J301
1 VSS
2 FROMIP-HSYNC
3 5V
4 FROMCCD-HSYNC
Check continuity
During pre-heating, about 4.5 VDC When ON, about 2.3 VDC
J208
J427
15V
FLSS
0
-12V
6
5
4
3
About 0.4 VDC
Check continuity
40
39
38
37
J112-A
J113-A
J706
Check for disconnection.
J103
Composite power supply PCB
J209
3 PFLPWM 10
4 PFLPH 9
14 FLSSET 7
13 FLPWM 8
12 FLPH 9
J714-A
Image processor PCB
About 2.8
1.1VDC
(OFF)
(ON)
DC controller PCB
J203
VSS
24VR
1
2
3
4
VSS
24VU
J111
J204
J708
1 2 3 4
5V
BD
OV
4 3 2 1
J510
BD PCB

Figure 14-409 E220, E301, E803

19 E240 (The communication between DC CPU and IP-CPU has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power. Is the problem corrected?	YES	End.
DIMM	2	Disconnect and then connect DIMM (J721, J722) on the image processor PCB; then, turn on the main power. Is the problem corrected?	YES	End.
Image processor PCB			NO	If the problem still occurs after replacement of the DIMM, replace the image processor PCB.

20 E243 (The communication between the control panel and the image processor PCB has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power. Is the problem corrected?	YES	End.
Connector	2	Is the connection between the connector J710 on the image processor PCB and the J901 on the CPU PCB good?	NO	Correct the connection.
Harness	3	Is there continuity on the harness between the control panel PCU PCB and the image processor PCB? • J901-B12 and J710-B4 • J901-B14 and J710-B	NO	Replace the harness.
Control panel	4	Replace the control panel. Is the problem corrected?	YES	End.
Image processor PCB			NO	Replace the image processor PCB.

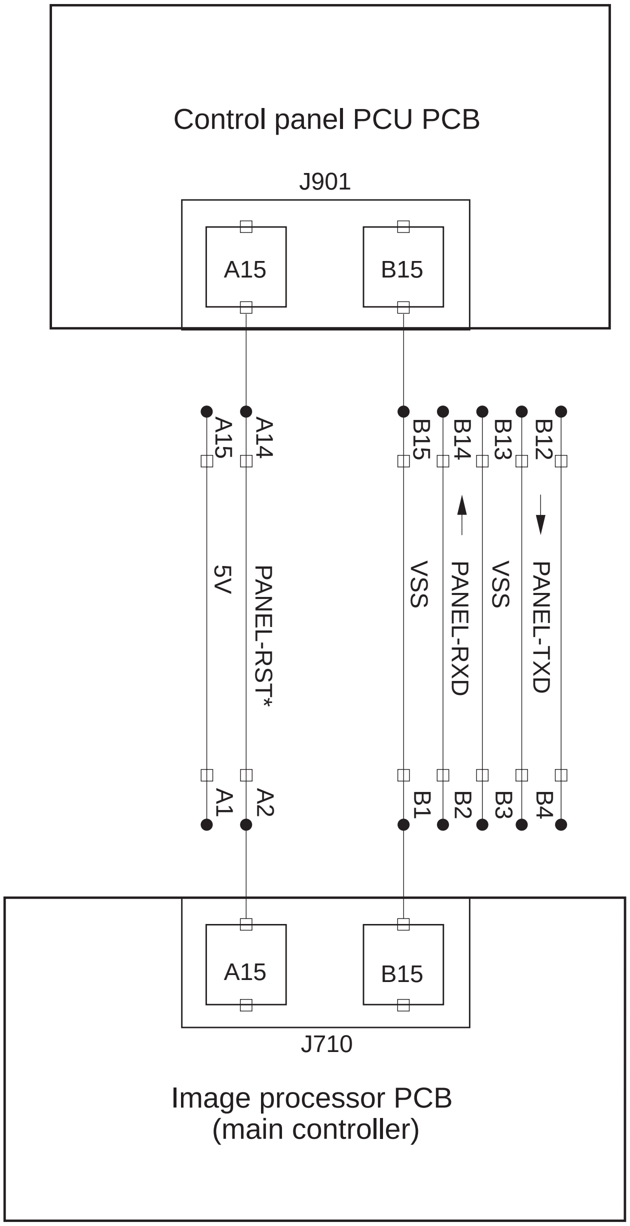

Control panel PCU PCB
J901
A15
B15
A15
A14
B15
B14
B13
B12
5V
PANEL-RST*
VSS
PANEL-RXD
VSS
PANEL-TXD
A1
A2
B1
B2
B3
B4
A15
B15
J710
Image processor PCB
(main controller)

Figure 14-410 E243

21 E261 (The zero-cross signal has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power. Is the problem corrected?	YES	End.
Connector	2	Is the connection between the connector J103 on the DC controller PCB and the connector J209 on the composite power supply PCB good?	NO	Correct the connection.
Harness		Is the continuity between J103-A8 (PZC) and J209-A5 good? (zero-cross signal)	NO	Replace the harness.
Harness		Is the continuity on the harness between the DC controller PCB and the image processor PCB good? • J113-B11 and J714-B10	NO	Replace the harness.
DC controller PCB		Replace the DC controller PCB. Is the problem corrected?	YES	End.
Composite power supply PCB			NO	Replace the composite power supply PCB.

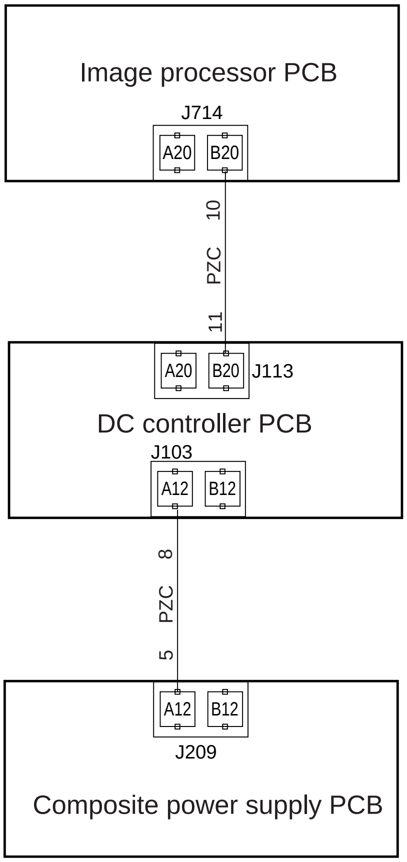


Image processor PCB
J714
A20
B20
10
PZC
11
A20
B20
J113
DC controller PCB
J103
A12
B12
8
PZC
5
A12
B12
J209
Composite power supply PCB

Figure 14-411 E61

22 E300 (Downloading data has an error.)

Cause	Step	Check	Yes/No	Action
Downloading data (selected)	1	Is the data compatible with the machine model?	NO	Select the correct data.
Downloading data			YES	Install the downloading tool.

23 E315 (The image data coding mechanism has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power. Is the problem corrected?	YES	End.
Image memory.	2	Re-connect the expansion image memory (J723, J724). Is the problem corrected?	YES	End.
J706	3	Is the connector J706 on the image processor PCB connected poorly?	YES	Connect it securely.
Image processor PCB			NO	Replace the image processor PCB.

24 E601 (The communication between the SCSI board and the machine has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power.	YES	End.
PCB	2	Is the SCSI board firmly connected to the system motherboard?	NO	Correct the connection.
SCSI board		Replace the SCSI board. Is the problem corrected?	YES	End.
System motherboard				Replace the system motherboard image processor PCB.

25 E603 (The SCSI fuse has an open circuit.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power. Is the problem corrected?	YES	End.
Fuse	2	Is there electrical continuity in the fuse on the SCSI board?	NO	Replace the fuse.
Is there continuity in the fuse on the SCSI board?			YES	Replace the SCSI board.

26 E604 (The image memory has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power. Is the problem corrected?	YES	End.
Contact (expansion image memory)	2	Disconnect and connect the image memory, and turn on the main memory. Is the problem corrected?	YES	Correct the connection of the image memory.
Expansion memory	3	If only one image memory has been expanded, is it in J724?	YES	Relocate it to J723. (A sole memory must be installed to J723.)
Image memory	4	Disconnect the expanded image memory, and turn on the power. Is the problem corrected?	YES	Replace the image memory.
Image processor PCB			NO	Replace the image processor PCB.

27 E605 (The image memory battery has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off the main power, and turn it on in about 1 min. Is the problem corrected?	YES	End.
Connector	2	Is the harness between the battery PCB and the image processor PCB connected correctly?	NO	Correct the connection.
Battery	3	Replace the battery. Is the problem corrected?	YES	Replace the battery.
Image processor PCB			NO	Replace the image processor PCB.

28 E674 (The fax unit has a fault.)

Cause	Step	Check	Yes/No	Action
Connector	1	Is the connection of the following normal? • between fax PCB and system motherboard • between system motherboard and image processor PCB (between fax unit and machine)	YES	Correct the connection. At this time, check the pins for deformation.
Fax PCB System motherboard			NO	Replace the fax PCB. Replace the system motherboard.

29 E677 (The communication between the printer board and the machine has a fault.)

Cause	Step	Check	Yes/No	Action
PCB	1	Check the connection between the printer board and the PDL I/F board and the system motherboard. Is any of the pins bent or otherwise not normal?	YES	Correct the connection.
Printer board	2	Replace the printer board. Is the problem corrected?	YES	End.
PDL 1/F board, System motherboard, Image processor PCB			NO	Replace the PDL I/F board, system motherboard, and image processor PCB.

30 E710 (The IPC communication chip on the image processor PCB has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power supply. Is the problem corrected?	YES	End.
Image processor PCB			NO	Check to make sure that the image processor PCB is free of dust or foreign matter; then, replace the image processor PCB.

31 E711 (IPC communication has a fault.)
32 E712 (The communication with the feeder has a fault.)
33 E713 (The communication with the sorter has a fault.)
34 E716 (The communication with the pedestal has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power. Is the problem corrected?	YES	End.
Cable	2	Disconnect and connect the cable connecting the accessories. Is the problem corrected?	YES	Correct the connection.
Cable	3	Is the continuity of the cable normal?	NO	Replace the cable.
Options print PCB	4	Is there an output of 24 VDC at J143-1/J143-2 and J142-1/1442-2? (J142 and J143 are used in common.)	YES	Replace the options print PCB.
Image processor PCB			NO	Replace the image processor PCB.

35 E717 (The communication with the copy data controller has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Clear the error in service mode (COPIER>FUNCTION>CLEAR>ERR); then, turn off and then on the main power supply. Is the problem corrected?	YES	End.
Connector	2	Is the wiring between the DC controller PCB and the copy data controller normal?	NO	Correct the wiring.
Harness	3	Is there continuity between J109 of the DC controller PCB and the copy data controller?	NO	Replace the harness.
Copy data controller	4	Replace the copy data controller. Is the problem corrected?	YES	End.
DC controller PCB			NO	Replace the DC controller PCB.

36 E803 (The output voltage of the composite power PCB has a fault.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power. Is the problem corrected?	YES	End.
	2	Does the scanning lamp turn on when the Copy Start key is pressed? Or, is it dark after it has turned on.	YES	• If it does not turn on, see "The scanning lamp fails to turn on." • If it turns on but is dark, replace it (its ends may be blackened).
Wiring	3	Is the connection between J111 on the DC controller PCB and J204 on the composite power PCB good?	NO	Correct the connection.
Composite power supply PCB (J208)	4	Is the connection of the connector J208 on the composite power supply PCB normal?	NO	Connect it securely.
Continuity	5	Check the 24-VDC line between J111 and J204. Is its continuity good?	YES	Replace the harness.
DC controller PCB	6	Is there an output of 24 VDC at the J111-1 and J111-3 on the DC controller PCB?	NO	Replace the DC controller PCB.
Composite power supply PCB				Replace the composite power supply PCB.

37 E805 (The fan rotation is faulty.)

Cause	Step	Check	Yes/No	Action
	1	Turn off and then on the main power. Is the problem corrected?	YES	End.
Connector	2	Check the details of the error history in service mode (Table 10-201). If no detail code is indicated, suspect the feeder fan (FM1) or the reversing guide cooling fan (FM9). Is the connection of these fans normal? If a detail code is indicated, is the connection of the indicated fan good?	NO	Correct the connection.
DC controller PCB	3	Is the drive signal of the fan identified in the previous step about 22 VDC while the fan is rotating or about 12 VDC otherwise?	NO	Replace the DC controller PCB.
Fan			YES	Replace the fan

Notation	Detail code	Normal rotation signal	Jack number	I/O>DC-CON>P011
FM2	0002	FM2LK	J107-A5	bit0
FM3	0003	FM3LK	J107-A8	bit1
FM4	0004	FM4LK	J112-B8	bit2
FM5	0005	FM5LK	J112-A8	bit3
FM6	0006	FM6LK	J112-A11	bit7
FM7	0007	FM7LK	J112-B14	bit4
FM8	0008	FM8LK	J112-B17	bit5
FM10	0010	FM10LK	J118-2	bit11
FM11	0011	FM11LK	J107-A5	bit12
FM12	0012	FM12LK	J104-A6	bit13
FM13	0013	FM13LK	J04-A9	bit14
FM14	0014	FM14LK	J107-A5	bit8
FM15	0015	FM15LK	J107-A8	bit9
FM16	0016	FM16LK	J119-8	bit10
FM17	0017	FM17LK	J112-B11	bit6
FM18	0018	FM18LK	J104-A12	bit15

38 DC power is absent.

Cause	Step	Check	Yes/No	Action
Error indication	1	Turn on the main power switch. Does the error indication turn on?	YES	See the appropriate descriptions for each error indication.
AC power supply	2	Is AC power present?	NO	See "AC power is absent."
Wiring, DC load	3	Turn off the main power switch, and disconnect all the following connectors. ■ Composite Power Supply PCB J203, J204, J209 ■ Low-Voltage Power Supply PCB J600, J601, J602, J603, J604, J605, J607 ■ Options Print PCB J142, J143 Is the output voltage of the terminals indicated below normal when the power switch is turned on?	NO	Turn off the power switch, and connect one of the connectors you have disconnected. Perform the same on all connectors to find the connector that activates the protection circuit; then, check the wiring and DC loads from that connector.
Fuse, Wring	4	Is there continuity in the fuse?	NO	Replace the fuse. Check the DC load and wiring of the fuse.
Composite power supply PCB, Options print PCB			YES	Replace the composite power supply PCB or the options print PCB.

■ Composite Power Supply PCB

Connector	Pin	Output
J203	1	+24V
	2	0V
J204	1	+24V
	2	0V
	3	+24V
	4	0V
	5	+24V
	6	0V
	7	+24V
	8	0V
	9	+24V
	10	0V
J209	B1	+5V
	A11	0V

■ Options Print PCB

Connector	Pin	Output
J142	1	+24V
	2	+24V
	3	0V
	4	0V
J143	1	+24V
	2	+24V
	3	0V
	4	0V

■ Low-Voltage Power Supply PCB

Connector	Pin	Output
J600	1	+38V
	2	GND
	3	+38V
	4	GND
	5	+38V
	6	GND
	7	NC
	8	NC
J601	1	+5.1V
	2	GND
	3	GND
	4	+15V
	5	-12V
	6	+15V
	7	GND
	8	GND
	9	+5.1V
J602	1	+8.0V
	2	GND

Connector	Pin	Output
J603	1	+5.1V
	2	GND
	3	+3.4V
	4	GND
J604	1	+15V
	2	-12V
	3	GND
	4	+5.1V
	5	GND
	6	+3.4V
	7	GND
J605	1	+15V
	2	GND
	3	+5.1V
	4	GND
	5	+3.4V
	6	GND
J607	1	+5.1V
	2	GND

39 The photosensitive drum fails to rotate.

Cause	Step	Check	Yes/No	Action
	1	Is E010 indicated?	YES	See the descriptions for E010.
Drum unit	2	Correct the insertion of the drum unit. Is the problem corrected?	YES	End.
Drum drive assembly			NO	Remove the drum drive assembly, and correct or replace faulty parts as necessary.

40 Pick-up operation fails (from the cassette).

Cause	Step	Check	Yes/No	Action
	1	Does the Add Paper message fail to turn off?	YES	See "The Add Paper message fails to turn off."
Cassette	2	Correct the setting of the cassette. Is the problem corrected?	YES	End.
Pick-up roller	3	Has the pick-up roller reached the end of its life?	YES	Replace the pick-up roller.
Harness, Connector	4	Check the wiring. Is there a fault?	YES	Correct the wiring.
Fuse (FU1601; pick-up PCB)	5	Is there continuity in the fuse (FU1601) on the pick-up PCB?	NO	Replace the fuse (replace the pick-up PCB as necessary).
SL1	6	Is there continuity in the pick-up roller down solenoid (SL1)?	NO	Replace the solenoid.
Pick-up motor	7	Replace the pick-up motor. Is the problem corrected?	YES	End.
Pick-up PCB	8	Replace the pick-up PCB. Is the problem corrected?	YES	End.
DC controller PCB, Image processor PCB			NO	Check the harness (continuity) between the image processor PCB and the DC controller PCB; if normal, replace the DC controller PCB and the image processor PCB.

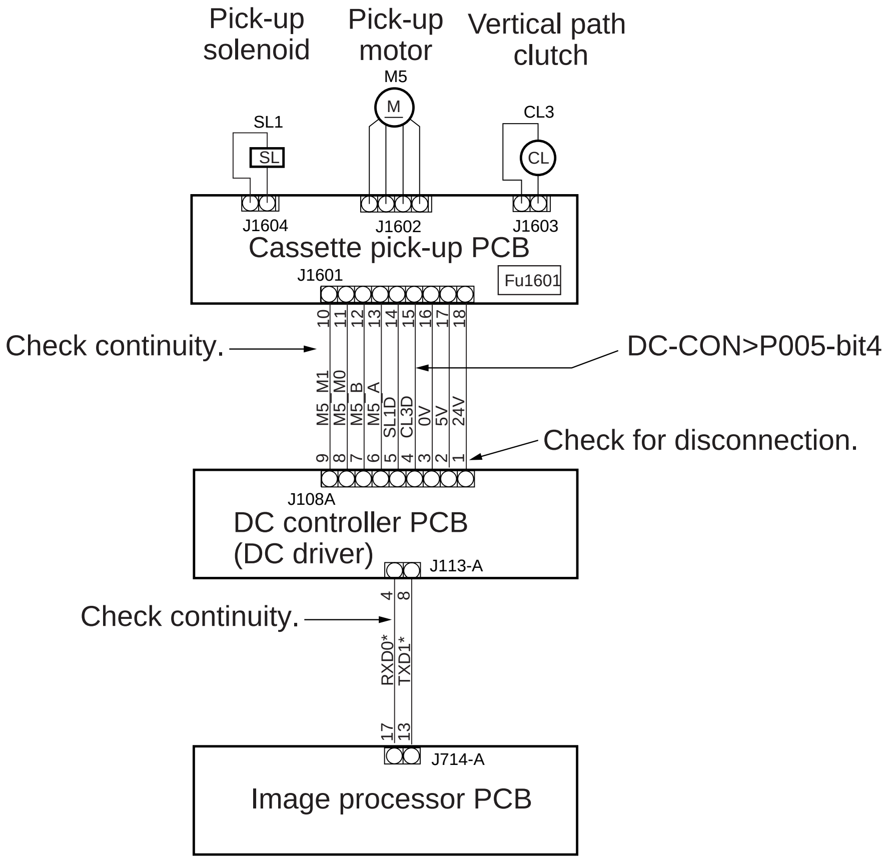

Pick-up solenoid
Pick-up motor
Vertical path clutch
M5
M
SL1
SL
CL3
CL
J1604
J1602
J1603
Cassette pick-up PCB
J1601
Fu1601
10 11 12 13 14 15 16 17 18
Check continuity.
DC-CON>P005-bit4
M5_M1
M5_M0
M5_B
M5_A
SL1D
CL3D
0V
5V
24V
Check for disconnection.
9 8 7 6 5 4 3 2 1
J108A
DC controller PCB
(DC driver)
J113-A
4 8
Check continuity.
RXD0*
TXD1*
17 13
J714-A
Image processor PCB

Figure 14-412 Pick-Up Failure

41 The lifter fails to move up.

Cause	Step	Check	Yes/No	Action
Cassette	1	Slide out the cassette, and move up the holding plate of the cassette by hand. Does it move smoothly?	NO	Check the inside of the cassette for foreign matter.
Paper level sensor	2	Is the paper level sensor in the problem holder normal? (See the descriptions on how to check photointerrupers.)	NO	Replace the pick-up PCB.
Lifter drive assembly	3	Is the lifter drive assembly normal?	NO	Correct it.
Pick-up assembly			YES	Replace the pick-up assembly.

42 Pick-up operation fails (from the multifeeder).

Cause	Step	Check	Yes/No	Action
Multifeeder pick-up clutch (CL2)	1	Select the multifeeder, and press the Copy Start key. Doe the pick-up roller of the multifeeder rotate?	NO	Check the wiring; if normal, replace the clutch.
Paper guide cam	2	Select the multifeeder. Doe the paper guide plate spring up when the Copy Start key is pressed?	YES	Check the position of the paper guide plate cam and the separation pad. As necessary, adjust/replace the parts.
Multifeeder holding plate releasing solenoid (SL3)	3	Does I/O>DC-CON>P005-bit7 change from '0' to '1' during pick-up from the multifeeder?	NO	Check the wiring; if normal, replace the solenoid.
DC controller PCB			YES	Replace the DC controller PCB.

43 The registration roller fails to rotate.

Cause	Step	Check	Yes/No	Action
Registration roller	1	Press the Copy Start key. Doe the registration roller rotate immediately after the scanner starts to move forward?	YES	Check the registration roller drive assembly and wiring.
Registration clutch (mounting)	2	Is the grip ring used to mount the registration clutch mounted securely?	NO	Mount it securely.
DC controller PCB	3	Does I/O>DC-CON>P005-bit3 change from '0' to '1'? (J102-B4: CL1D*)	NO	Replace the DC controller PCB.
Registration clutch (CL1)			YES	Check the wiring from the DC controller PCB to the clutch; if normal, replace the clutch.

44 The scanner fails to move forward/in reverse.

Cause	Step	Check	Yes/No	Action
Scanner drive cable	1	Is the scanner drive cable routed correctly?	NO	Correct the routing.
Scanner path	2	Is the scanner rail free of dirt, and does the scanner move smoothly?	YES	Check the scanner rail for dirt, foreign matter, and any other which may come into contact with the scanner.
Connector	3	Is the wiring/connection from the connector J116 on the DC controller PCB to the scanner motor through the relay connector J28 normal?	NO	Correct the wiring/ connection.
Scanner motor (M3)	4	Replace the scanner motor. Is the problem corrected?	YES	End.
DC controller PCB			NO	Replace the DC controller PCB.

45 The pre-exposure lamp fails to turn on.

Cause	Step	Check	Yes/No	Action
Pre-exposure lamp	1	Does the setting of I/O>DC-CON>P005-bit1 change from "0' to '1' as soon as the pre-exposure lamp turns on? (J112-A2: PED) The resistance of the pre-exposure lamp is about 25 to 30 Ω	YES	End.
DC controller PCB			NO	Replace the DC controller PCB.

46 The scanning lamp fails to turn on.

Cause	Step	Check	Yes/No	Action
Scanning lamp	1	Are both ends of the scanning lamp blackened?	YES	Replace the scanning lamp.
Scanning lamp		Is the scanning lamp mounted correctly?	NO	Correct the mounting.
Connector		Are the connectors J90 and J91 connected correctly? In addition, is the connector J208 on the composite power supply PCB correct?	NO	Correct the connection.
Composite power supply PCB		Does the voltage between J103-A9 (+) on the DC controller PCB and GND change when the Copy Start key is pressed?	YES	Replace the composite power supply PCB.
DC controller PCB		Does the voltage between J113-B12 (+) and GND change when the Copy Start key is pressed?	YES	Replace the DC controller PCB.
Image processor PCB			NO	Replace the image processor PCB.

See figure 14-409.

47 The fixing heater fails to turn on.

Cause	Step	Check	Yes/No	Action
	1	Is E000 indicated?	YES	See the descriptions for E000.
SSR	2	Is the continuity between 6 and 7 and between 7 and 8 normal?	NO	Replace the SSR.
Fixing assembly	3	Replace the fixing assembly. Is the problem corrected?	YES	End.
DC controller PCB			NO	Replace the DC controller PCB.

See figure 14-401.

48 The counter fails to operate.

Cause	Step	Check	Yes/No	Action
Counter	1	Turn off the main power switch, and disconnect the counter connector (CNT1: J9); then, measure the resistance on the counter side. Is it about 480 Ω?	NO	Replace the counter.
DC controller PCB			YES	Check the wiring; if normal, replace the DC controller PCB.

See figure 14-402.

49 The Add Paper message fails to turn off.

Cause	Step	Check	Yes/No	Action
	1	Does the lifter move up?	NO	See "The lifter fails to move up."
Pick-up PCB	2	Is the pick-up PCB mounted to the pick-up unit correctly?	NO	Correct the mounting.
Paper sensor	3	Put paper in the cassette, and set the cassette in the machine. Is the reading of I/O>DC-CON>P008-bit10 (upper) and -bit11 (lower) '0' when there is paper? (upon detection, '0') upper: J108-A10 lower: J108-A11	NO	Check the sensor lever; if normal, replace the problem sensor.
DC controller PCB			YES	Replace the DC controller PCB.

50 The jam message fails to turn off.

Cause	Step	Check	Yes/No	Action
Jam paper	1	Find out the location of the jam in service mode (DISPLAY>JAM). Is the jam paper near the sensor which has detected a jam?	NO	See "The lifter fails to move up."
Paper sensor	2	Is the sensor in question normal? • I/O check • Meter check	NO	Replace the sensor.
DC controller PCB			YES	Replace the DC controller PCB.

51 The Add Toner message fails to turn off.

Cause	Step	Check	Yes/No	Action
Stirring spring	1	Remove the developing assembly. Is the stirring spring used to agitate toner around the toner sensor (TS1) mounted correctly?	NO	Correct the mounting.
Toner sensor	2	Is the reading of I/O>DC-CON>P003-bit3 '0' even after toner has been supplied?	NO	Replace the toner sensor.
DC controller PCB			YES	Replace the DC controller PCB.

52 The fax error indicator lamp fails to turn off.

Cause	Step	Check	Yes/No	Action
Paper	1	Is there paper in all cassettes in the machine?	NO	Supply the cassettes with paper. Inform the user that the presence of a cassette without paper will cause the fax error lamp to flash.
Fax	2	Is fax transmission/reception normal?	NO	Check the wiring to the telephone line.
Image processor PCB	2	Does FUNCTION>MISC-P>IP-CHK end in 'OK'?	NO	Replace the image processor PCB.
Fax PCB			YES	Check the wiring of the PCB; if normal, replace the fax PCB.

53 The Close Front Cover message fails to turn off.

Cause	Step	Check	Yes/No	Action
Front cover switch	1	Is the front cover closed firmly?	NO	Check the switch lever mechanism.
DC controller PCB (fuse)			YES	Replace the DC controller PCB; however, be sure to perform the following in advance: • Check FU201 for continuity; if there is no continuity, see below.

If FU201 has blown,

- Check for wire trapping and make sure the harness shielding has not peeled.

1. Without removing the DC controller PCB from the copier (harness connected), check to make sure that J105-1 and GND are shorted.
2. Connect the connectors from the DC controller PCB one at a time, and see if the meter reading changes from 0 ½ upon each disconnection.
3. If the reading changes, the harness of the 5-VDC load leading to the connector that caused the change is likely to be trapped or its harness shield may have peeled. (Correct the problem as by covering the bare area to prevent direct contact with the stay. Be sure to check the 5-V line of J106.)
4. If J105-1 and GND remain shorted when all connectors have been disconnected, replace the DC controller PCB.

54 Pick-up operation fails (from the side paper deck).

Cause	Step	Check	Yes/No	Action
Upper right door, Lower right door	1	Are the upper right door and the lower right door closed firmly?	NO	Close the doors.
Lifter	2	Does the lifter move down when the compartment is slid out of the deck. In addition, is the lifter movement (upward) heard when the compartment is set?	NO	See "The lifter fails to move up."
Deck pick-up roller	3	Does the pick-up roller rotate?	YES	If the roller is soiled, clean it with alcohol. If it is deformed because of wear, replace it.
Belt	4	Is the belt used to transmit drive to the pick-up roller routed correctly?	NO	Correct the routing.
Drive belt, Gear, Coupling	5	Is the drive from the deck main motor transmitted to the pick-up assembly through the drive belt, gear, and coupling?	NO	Check the drive belt, gear, and coupling.
IP PCB, Side deck driver PCB	6	Set the meter range to 30 VDC. Does the voltage between J104-11 (pick-up)/104-6 (feeding) on the side deck driver PCB and GND change from 24 V to 0 V when the Copy Start key is pressed?	NO	Check the side deck driver PCB and the IP PCB.
Deck pick-up clutch (CL102), Deck feeding clutch (CL101)			YES	Check the wiring to the clutch; if normal, replace the clutch.

55 The deck lifter fails to move up (side paper deck).

Cause	Step	Check	Yes/No	Action
Side paper deck	1	Is the deck mounted correctly?	NO	Correct the mounting.
Lifter cable	2	Is the lifter cable routed correctly?	NO	Correct the routing.
Spring, Lever	3	Push down the pick-up roller releasing lever by hand. Does it move down?	NO	Remove the pick-up assembly, and check the spring and lever.
Deck lifter motor (M102)	4	Does the deck lifter motor rotate?	YES	Go to step 7.
Deck open detecting switch (SW102)	5	Set the meter range to 30 VDC. Does the voltage between J109-1 and J109-3 on the side deck driver PCB change from about 0 to 24 V when the deck is closed?	YES	Check the wiring to the switch; if normal, replace the switch.
Deck set sensor (PS105)	6	Is the deck set sensor normal?	NO	Replace the deck set sensor.
Deck lifter position sensor (PS104)	7	Replace the deck lifter position sensor. Is the problem corrected?	YES	End.
Image processor PCB (copier side)			NO	Check the wiring to the IP PCB; if normal, replace the IP PCB.

V. TROUBLESHOOTING FEEDING PROBLEMS

A. Paper Jams

The time/day, location, type, and history of jams may be checked in service mode:

- COPIER>DISPLAY>JAM

Each jam code (type, sensor) uses the four digits (4th block) from the right.

■ First 2 Digits (type)

01xx	Delay jam
02xx	Stationary jam
03xx	Timing jam
04xx	Protection jam
10xx	Residual jam at power-on
11xx	Door open jam during copying
12xx	Double feeding jam
90xx	Logic jam

■ Last 2 Digits (sensor)

xx01	Pre-registration sensor
xx02	Vertical path 1 sensor
xx03	Vertical path 2 sensor
xx04	Cassette 1 pick-up sensor
xx05	Cassette 2 pick-up sensor
xx06	Cassette 3 pick-up sensor
xx07	Cassette 4 pick-up sensor
xx08	Cassette 5 pick-up sensor
xx09	Cassette 6 pick-up sensor
xx0A	Deck pick-up sensor
xx0B	Pre-registration sensor for manual pick-up
xx31	Internal delivery sensor
xx32	Bin 1 delivery sensor
xx33	Bin 2 delivery sensor
xx34	Bin 3 delivery sensor
xx35	Bin 3 inlet sensor
xx36	Fixing assembly outlet sensor
xx37	Reversal delivery bin 1 delivery sensor
xx38	Reversal delivery bin 2 delivery sensor
xx39	Reversal delivery bin 3 delivery sensor
xx3A	Reversal delivery bin 3 inlet sensor
xx61	Duplexing assembly inlet sensor
xx62	Re-pick up sensor

The machine is divided into the following blocks in terms of identifying jam locations:

[1] Pick-up assembly
[2] Separation/feeding assembly
[3] Fixing/delivery assembly, Reversing/feeding assembly
[4] Duplexing/feeding assembly

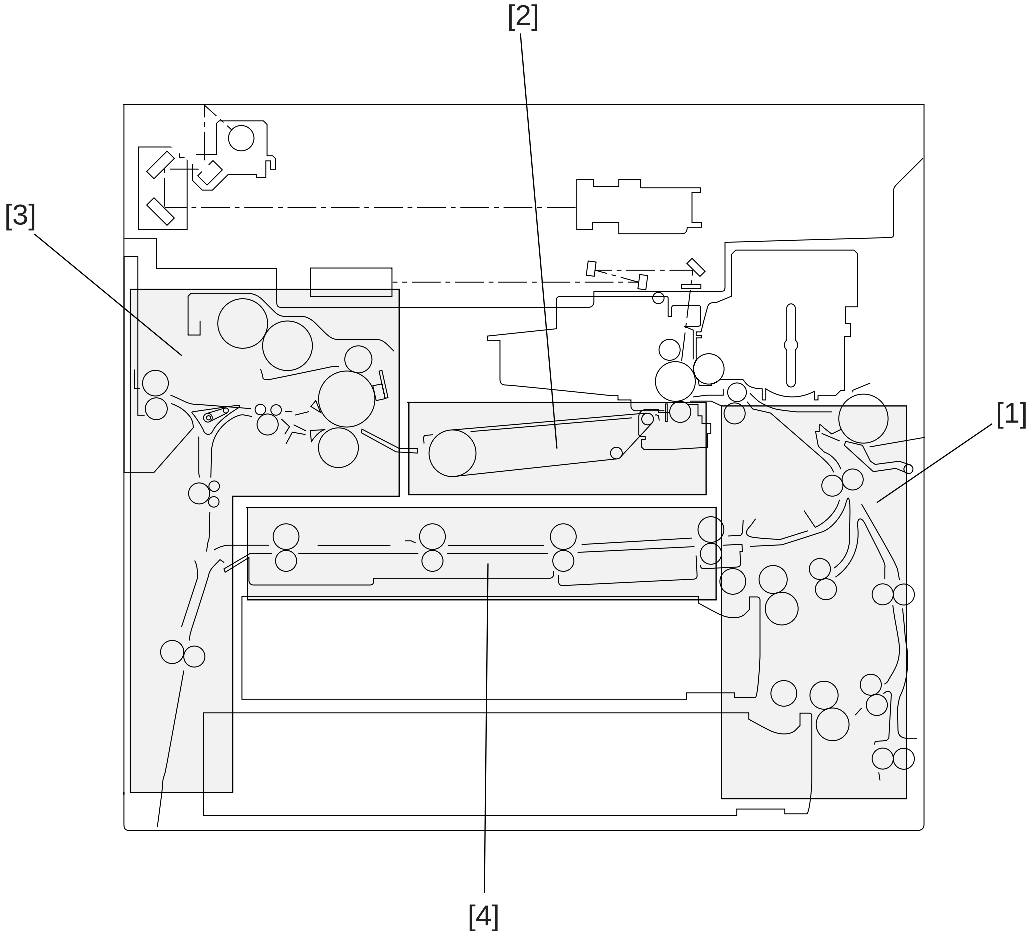


Figure 14-501

1 Pick-Up Assembly

Cause	Step	Check	Yes/No	Action
	1	Was the source of paper a cassette?	NO	Go to step 10.
Cassette	2	Is the cassette set in the machine correctly? Is the dial set correctly?	NO	Correct the setting.
	3	Try a different cassette. Is the problem corrected?		Check the inside of the cassette for foreign matter.
Paper	4	Is the paper curled or wavy?	YES	Replace the paper. Instruct the user on the correct method of storing paper.
	5	Try paper of a type recommended by Canon. Is the problem corrected?	YES	Advise the user to use recommended paper.
DC controller PCB, Pick-up clutch	6	Does the pick-up roller of the selected cassette holder rotate during copying operation?	NO	See "Pick-up operation fails."
Pick-up roller	7	Is the pick-up roller deformed or worn?	YES	Replace the pick-up roller.
Separation roller	8	Is the separation roller of each cassette holder deformed or worn?	YES	Replace the deformed or worn separation roller.
Torque limiter			NO	Replace the torque limiter.
Feeding roller	9	Is the feeding roller of each cassette holder deformed or worn?	YES	Replace the deformed or worn feeding roller.
Pick-up sensor	10	Is the operation of the pick-up sensor of each cassette normal? (See the instructions on how to check photointerrupers.)	NO	Check the wiring; if normal, replace the sensor.
	11	Does the multifeeder pick-up roller start to rotate when manual feeding is performed?	NO	See "Pick-up operation (from the multifeeder) fails."
Registration roller drive assembly	12	Does the registration roller operate normally?	NO	See "The registration roller fails to rotate."
Registration roller vertical path roller	13	Clean the registration roller and the vertical path roller. Is the problem corrected?	NO	Clean the roller; if the problem is not corrected, replace the deformed/ worn roller.
Paper	14	Try paper of a type recommended by Canon. Is the problem corrected?	YES	Advise the user to use recommended paper.
Pick-up roller			NO	Check the pick-up roller for wear and deformation.

2 Separation/Feeding Assembly

Cause	Step	Check	Yes/No	Action
Transfer roller	1	Is the transfer roller assembly set correctly?	NO	Check the transfer roller assembly.
Separation static eliminator	2	Is the separation static eliminator inserted fully to the rear?	NO	Insert the static eliminator until a click is heard.
Paper	3	Try paper of a type recommended by Canon. Is the problem corrected?	YES	Advise the user to use recommended paper.
Feeding belt	4	Is the feeding belt operating correctly?	NO	Check the belt pulley.
			YES	Check the feeding belt for deformation and wear.

3 Fixing/Delivery Assembly

Cause		Step	Check	Yes/No	Action
Delivery assembly separation claw		1	Is the separation claw worn or deformed?	YES	1. Replace the separation claw. 2. If dirt is found, clean it with solvent.
Fixing assembly	Upper/lower fixing roller	2	Is the upper/lower fixing roller deformed or scratched?	YES	Replace the roller.
	Paper guide	3	Is the paper guide soiled with toner?	YES	Clean it with solvent.
	Fixing assembly outlet sensor lever	4	Does the sensor lever move smoothly?	NO	Adjust the sensor lever.
	Fixing assembly outlet sensor (PS40)	5	Is the operation of the delivery detection sensor normal? (See the instructions on how to check photointerrupers.)	NO	Replace the sensor.
Delivery assembly	Delivery sensor lever	6	Does the delivery sensor lever move smoothly?	NO	Adjust the delivery sensor lever.
	Delivery sensor (PS7)	7	Is the operation of the delivery sensor normal? (See the instructions on how to check photointerrupers.)	NO	Replace the sensor.
	Delivery roller drive assembly	8	Does the delivery roller move smoothly?	NO	Check the delivery roller drive assembly.
Leading edge margin				YES	Check the leading edge of the paper to see if there is a margin.

4 Reversal Feeding/Lower Feeding/Re-Pick-Up Assembly

Cause	Step	Check	Yes/No	Action
Paper deflecting plate drive assembly	1	Is the paper deflecting plate (delivery flapper) of the delivery assembly operating?	NO	Check the paper deflecting plate drive.
Reversal feeding drive assembly	2	Is the operation of the reversal feeder motor/roller normal?	YES	Clean the reversal feeding roller.
			NO	Check the drive assembly.
PS6, PS8, PS9	3	Is the operation of the internal delivery sensor (PS6), duplexing assembly inlet paper sensor (PS8), and re-pick up sensor (PS9) normal?	NO	Replace PS6, PS8, and PS9 as necessary.
Duplexing/feeding drive assembly	4	Is the duplexing feeding roller 1/2 rotating?	NO	Check the duplexing feeding drive assembly.
Guide plate			YES	Check each guide plate for foreign matter and deformation.

B. Feeding Faults

1 Double Feeding

Cause	Step	Check	Yes/No	Action
Separation roller	1	Is the separation roller deformed or worn?	YES	Replace the separation roller.
Torque limiter			NO	Check the torque limiter.

2 Wrinkles

Cause		Step	Check	Yes/No	Action
Pick-up assembly		1	Turn off the power while paper is moving through the feeding assembly. Is the paper wrinkled? Or, is it moving askew?	YES	Check the pick-up assembly. Check the registration roller.
Paper		2	Try fresh paper. Is the problem corrected?	YES	The paper may be moist. Instruct the user on the correct method of storing paper.
		3	Is the paper of a type recommended by Canon?	NO	Advise the user to use recommended paper.
Fixing assembly	Inlet guide	4	Is the inlet guide soiled with toner?	YES	Clean it with solvent.
	Upper/lower fixing roller	5	Is the upper/lower roller scratched or deformed?	YES	Replace the fixing roller.
	Lower roller			NO	Check the lower roller pressure; if the result is not good, replace the fixing assembly.

VI. ARRANGEMENT AND FUNCTIONS OF ELECTRICAL PARTS

A. Clutches and Solenoids

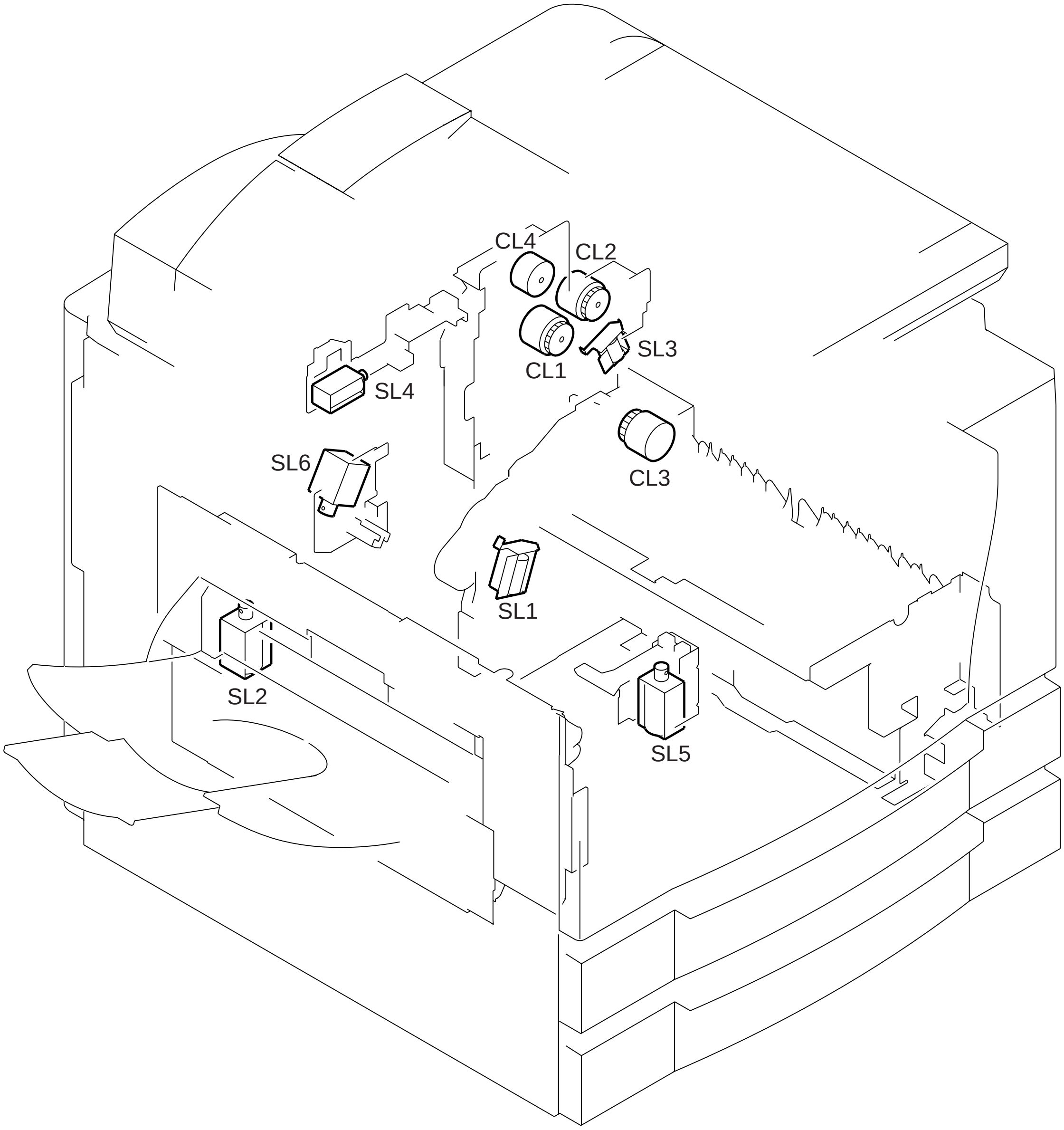
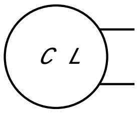
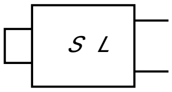

CL4
CL2
SL3
CL1
SL4
SL6
CL3
SL1
SL2
SL5

Figure 14-601

Clutches and Solenoids

Symbol	Part	Notation	Function
	Clutch	CL1	Drives the registration roller.
		CL2	Drives the multifeeder pick-up mechanism.
		CL3	Drives the vertical path roller.
		CL4	Drives the developing cylinder.
	Solenoid	SL1	Moves down the pick-up roller.
		SL2	Drives the delivery flapper.
		SL3	Releases the multifeeder holding plate.
		SL4	Cleans the primary charging roller.
		SL5	Drives the fixing cleaning belt.
		SL6	Drives the fixing assembly inlet guide.

B. Motors

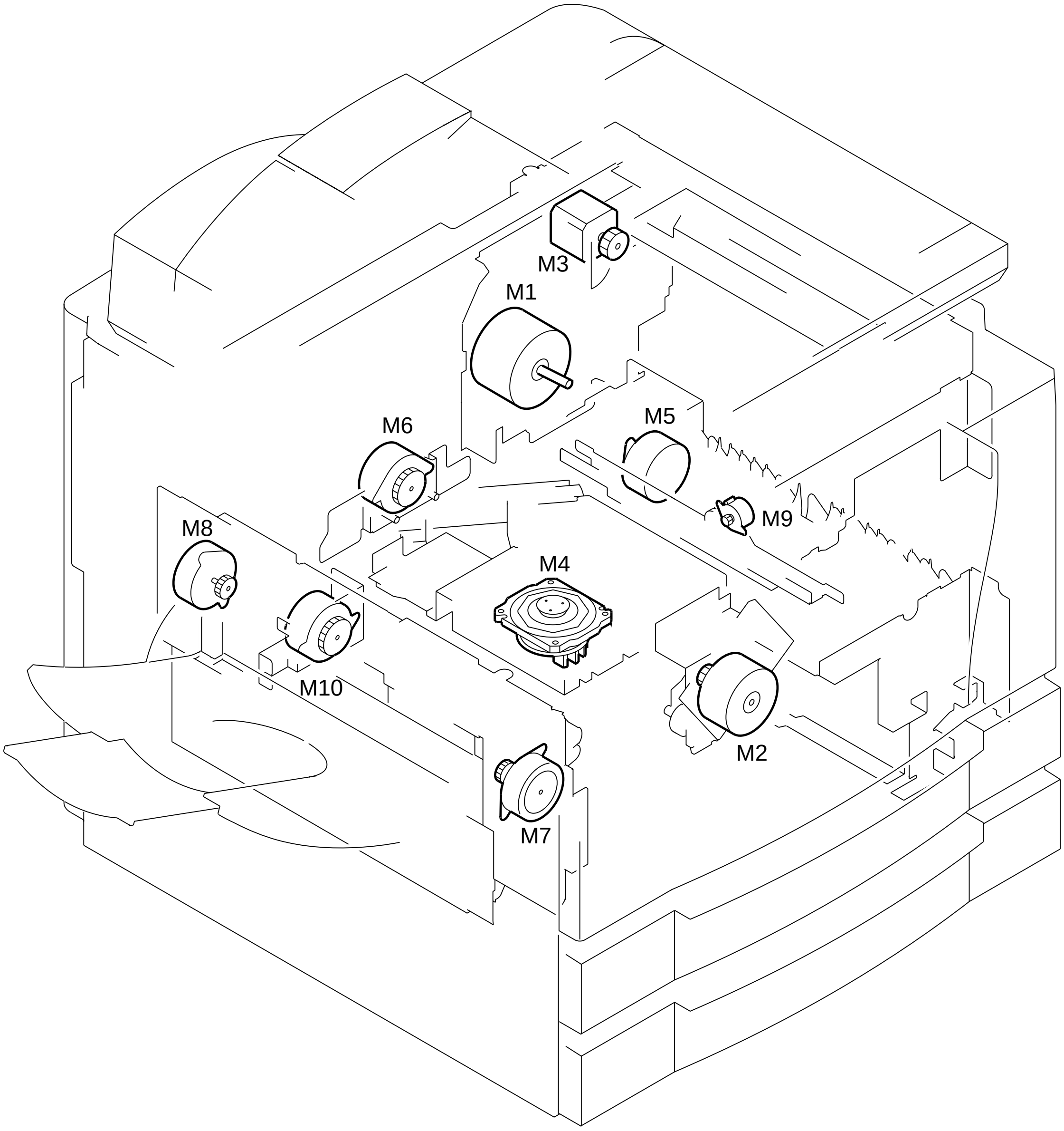
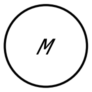

M3
M1
M6
M5
M9
M8
M4
M10
M2
M7

Figure 14-602

Motor

Symbol	Part	Notation	Function
	Motor	M1	Main motor
		M2	Fixing motor
		M3	Scanner motor
		M4	Laser scanner motor
		M5	Pick-up motor
		M6	Lower feeder motor
		M7	Reversal delivery motor
		M8	Delivery motor
		M9	Horizontal registration sensor shift motor
		M10	Duplexing reversal motor

C. Fan

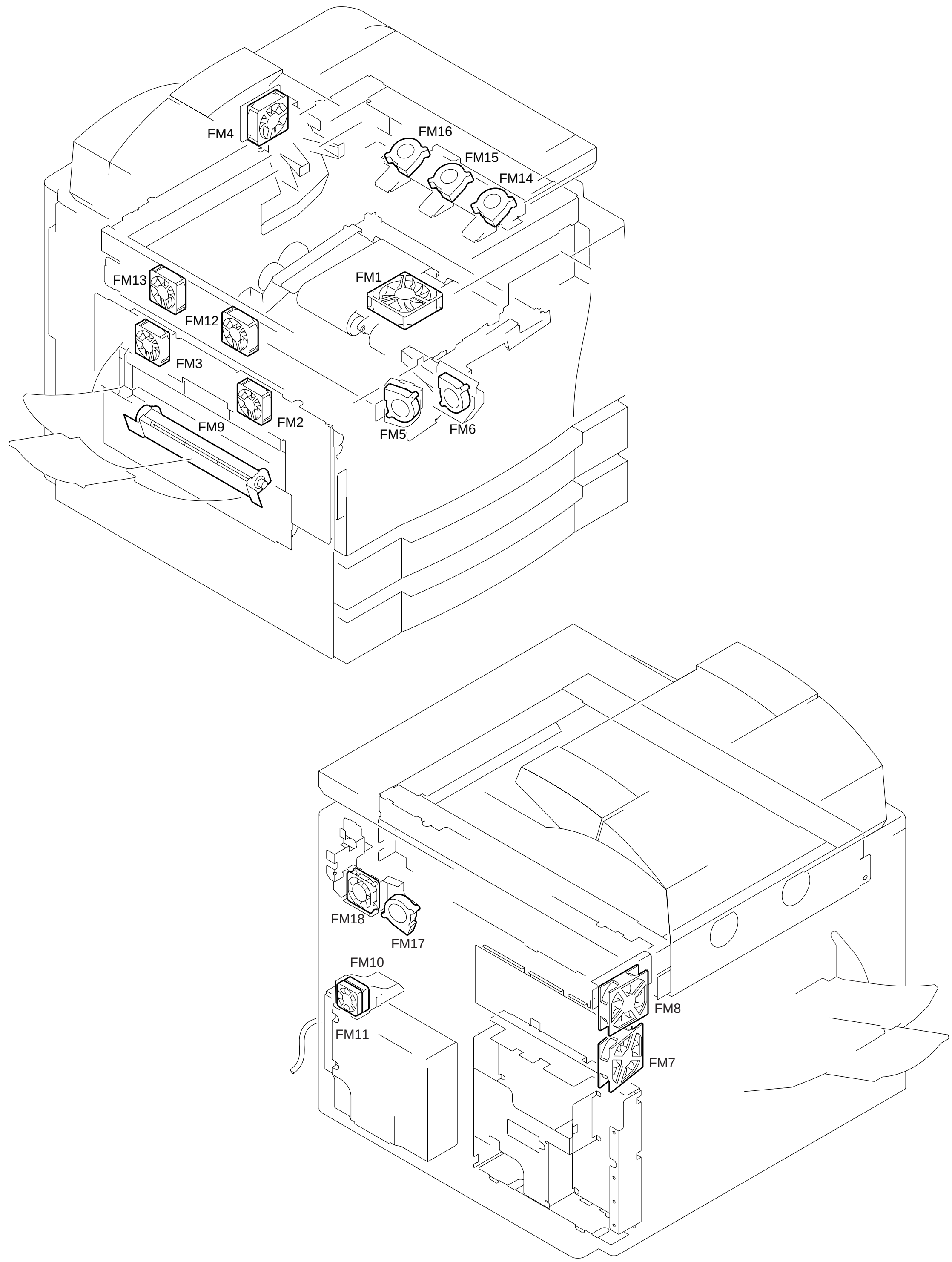
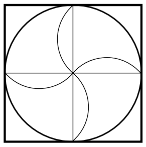

FM4
FM16
FM15
FM14
FM13
FM1
FM12
FM3
FM2
FM9
FM5
FM6
FM18
FM17
FM10
FM11
FM8
FM7

Figure 14-603

Fans

Symbol	Part	Notation	Function
	fan	FM1 FM2* FM3* FM4* FM5* FM6* FM7* FM8* FM9 FM10 FM11 FM12* FM13* FM14 FM15 FM16 FM17* FM18*	Feeding fan Fixing heat discharging fan 1 Fixing heat discharge fan 2 Laser drive cooling fan Laser scanner motor cooling fan 1 Laser scanner motor cooling fan 2 Cleaner cooling fan System cooling fan Reversal guide cooling fan Low-voltage power supply cooling fan 1 Low-voltage power supply cooling fan 2 Reader cooling fan 1 Leader cooling fan 2 Drum cartridge cooling fan 1 Drum cartridge cooling fan 2 Drum cartridge cooling fan 3 DC controller PCB cooling fan Scanner motor cooling fan

* Rotates at half speed during standby.

D. Sensors

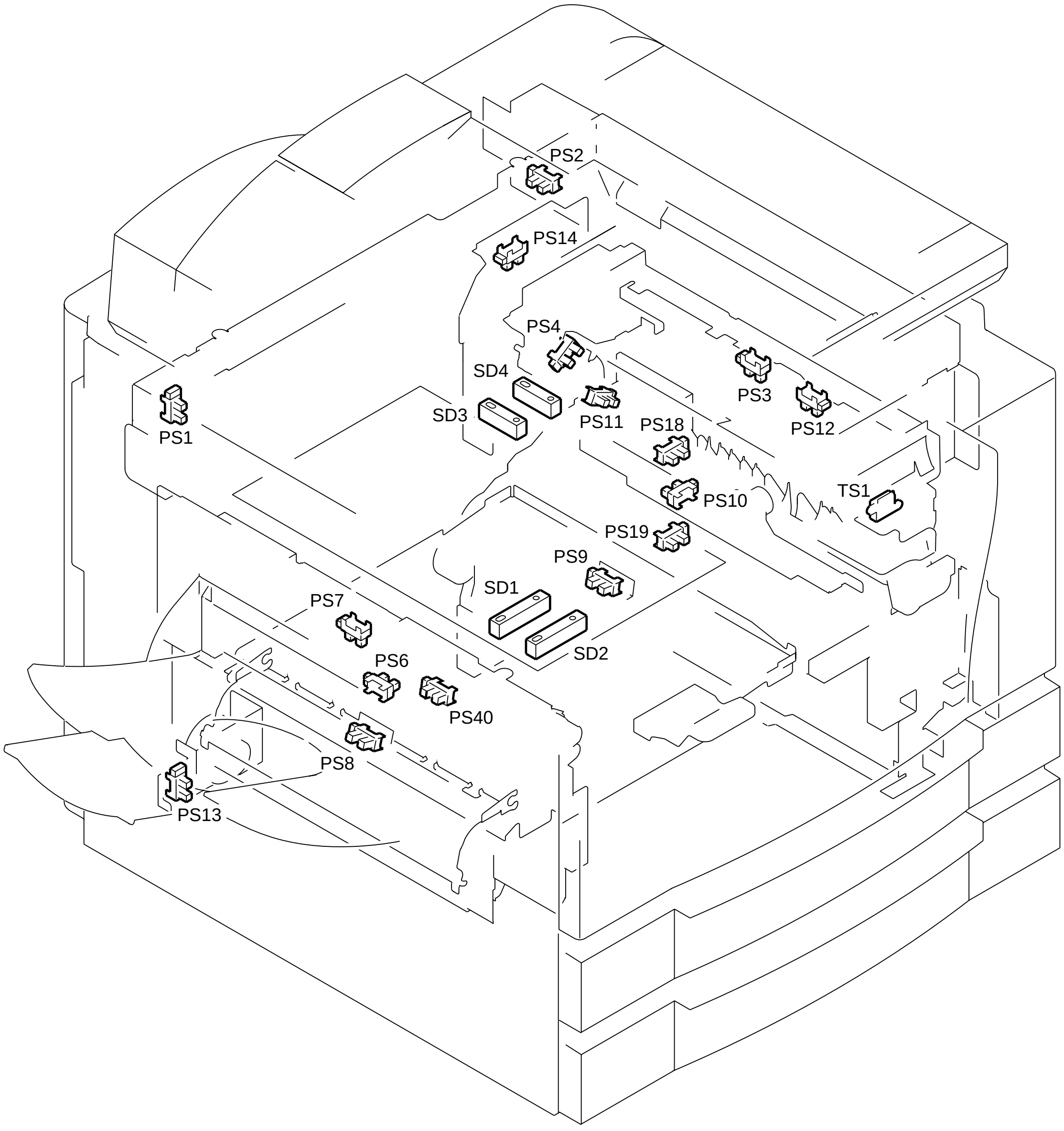
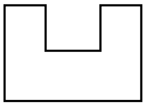

PS2
PS14
PS4
SD4
SD3
PS1
PS11
PS3
PS12
PS18
PS10
TS1
PS19
PS9
SD1
PS7
SD2
PS6
PS40
PS8
PS13

Figure 14-604

Sensors

Symbol	Name	Notation	Remarks
	Photointerrupter	PS1	Scanner home position detection
		PS2	Copyboard cover open/closed detection
		PS3	Multifeeder paper detection
		PS4	Pre-registration paper detection
		PS6	Internal delivery assembly paper detection
		PS7	External delivery assembly paper detection
		PS8	Re-pick up assembly paper detection
		PS9	Re-pick up assembly paper detection
		PS10	Horizontal registration paper detection
		PS11	Vertical path paper detection
		PS12	Right door open/closed detection
		PS13	Left door open/closed detection
		PS14	Waste toner detection
		PS18	Cassette 1 retry paper detection
		PS19	Cassette 2 retry paper detection
		PS40	Fixing assembly outlet paper detection
	Piezoelectric oscillating element	TS1	Toner level detection
	Reflecting type sensor	SD1	Original size sensor 1
		SD2	Original size sensor 2
		SD3	Original size sensor 3
		SD4	Original size sensor 4

E. Switches and Counters

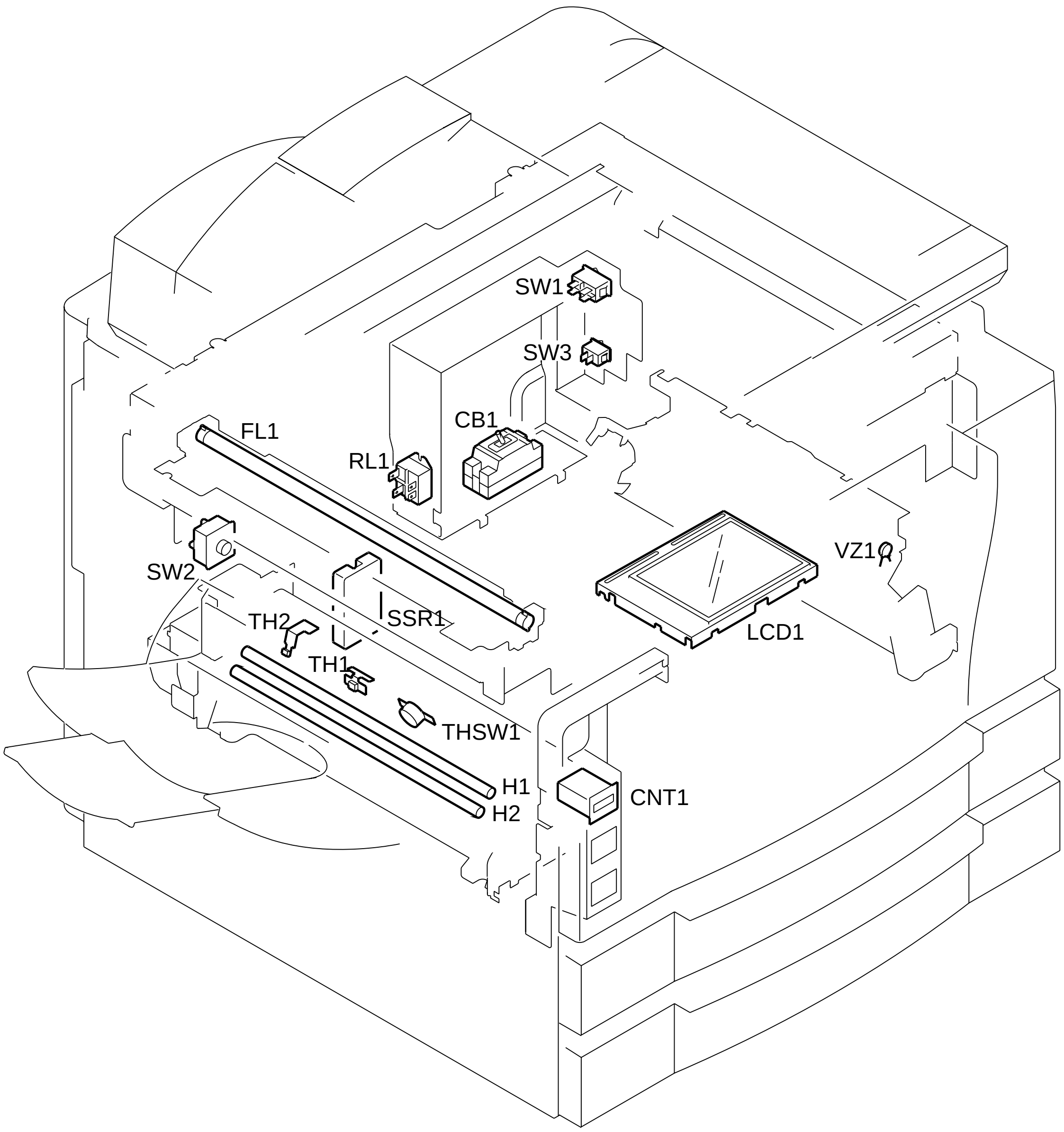

SW1
SW3
CB1
FL1
RL1
SW2
VZ1
SSR1
LCD1
TH2
TH1
THSW1
H1
H2
CNT1

Figure 14-605

Switches, Counters, Heaters, Varistors, and Fuses

Part	Notation	Name
Switch	SW1 SW2 SW3	Main power supply switch Front door switch Cassette heater switch
Counter	CNT1	Total copy counter 1
Varistor	VZ1	Pre-registration guide varistor
SSR	SSR1	Solid state relay
Scanning lamp (fluorescent lamp)	FL1	Scanning lamp
Heater	H1 H2	Fixing main heater Fixing sub heater
Thermistor	TH1 TH2	Fixing heater main thermistor Fixing heater sub thermistor (end)
Thermal switch	THSW	Fixing heater thermal switch
Circuit breaker	CB1	Circuit breaker

F. PCBs

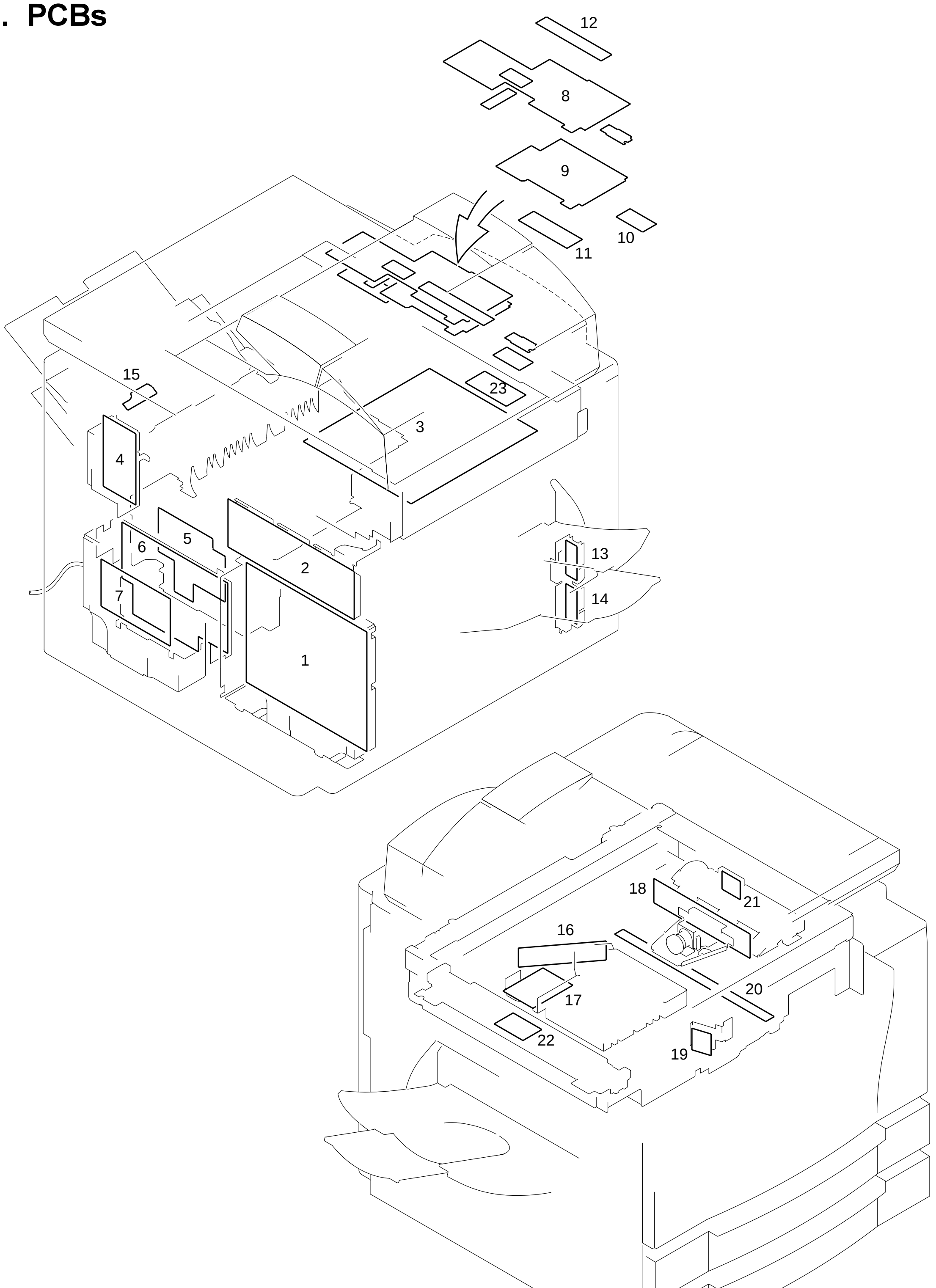

12
8
9
10
11
15
23
3
4
5
6
2
7
13
14
1
18
21
16
20
17
22
19

Figure 14-606

Switches, Counters, Heaters, Varistors, and Fuses

Part	Notation	Name
1	Composite power supply PCB	HVT, lamp regulator, DC power supply
2	DC controller PCB	DC load control (DC driver)
3	Image processor PCB	Image processing (main controller)
4	Accessories power supply	DADF, side paper deck
5	Pick-up unit PCB	Pick-up assembly sensor
6	Low-voltage power supply PCB	DC power supply
7	Noise filter	AC power supply noise removal
8	Control panel key PCB	
9	Control panel CPU PCB	
10	Inverter PCB	LCD (back light) power supply
11	Downloading PCB	
12	Function key PCB	
13	Upper cassette size detection PCB	Upper cassette size detection
14	Lower cassette size detection PCB	Lower cassette size detection
15	Multifeeder paper width detection PCB	Multifeeder paper width detection
16	Laser driver PCB	Laser dive
17	Laser scanner driver PCB	Laser scanner motor drive
18	Analog processor PCB	CCD drive, analog image processing
19	BD PCB	Laser beam detection
20	Pre-exposure lamp PCB	Photosensitive drum residual charge removal
21	Environment sensor PCB	Machine internal humidity detection
22	Intensity sensor PCB	Scanning lamp intensity detection
23	Battery PCB (accessory)	Fax image memory retention

G. Side Paper Deck

1. Sensors and Switches

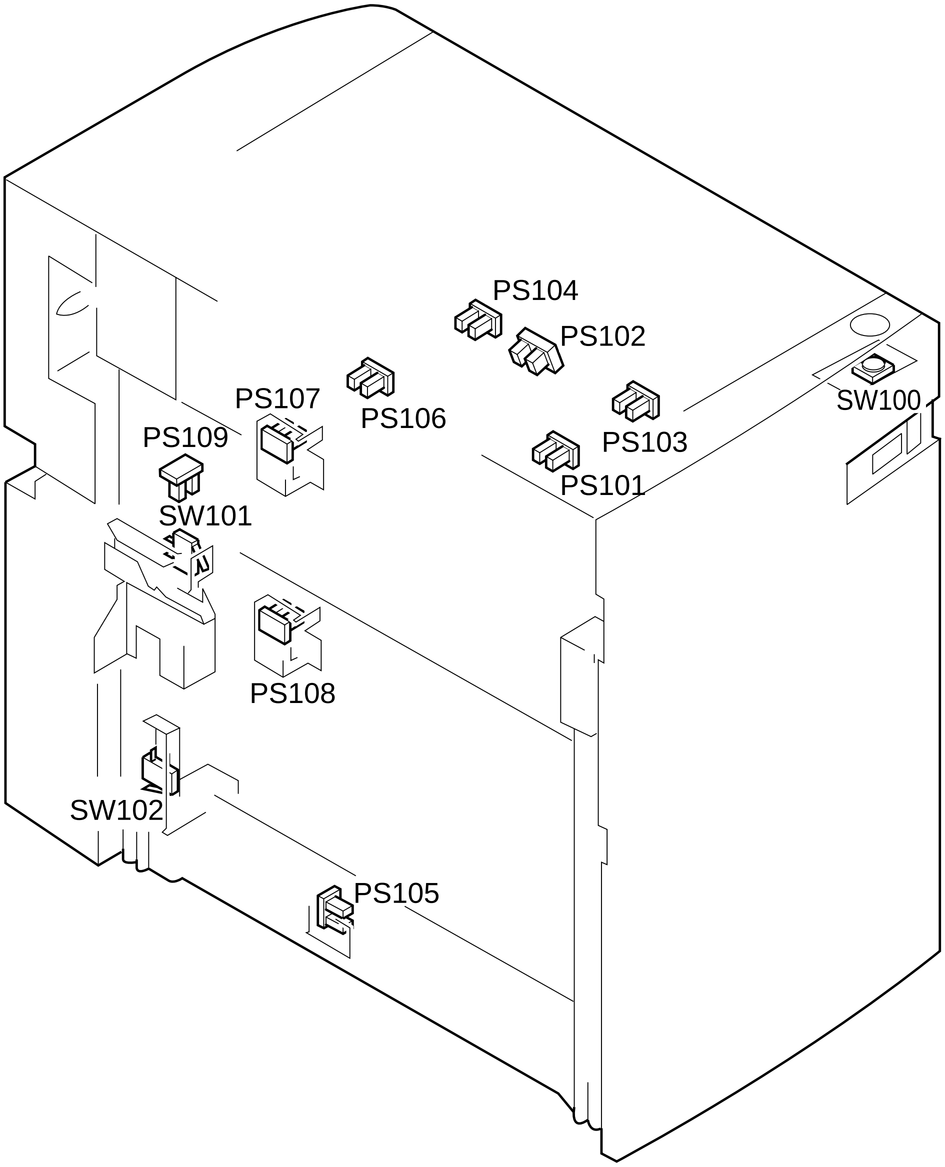

PS104
PS102
PS107
PS106
SW100
PS109
PS103
PS101
SW101
PS108
SW102
PS105

Figure 14-607a (side paper deck)

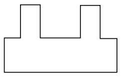
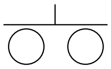
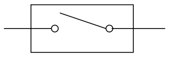
Symbol	Part	Notation	Function
	Photointerrupter	PS102	Deck lifter upper limit detection
		PS103	Deck paper supply position detection
		PS104	Deck set detection
		PS105	Deck pick-up guide open detection
		PS106	Deck vertical path paper detection
		PS107	Deck pick-up paper detection
		PS108	Deck paper detection
		PS110	Deck lifter position detection
	Switch	SW100	Deck open switch
	Microswitch	SW102	Deck open detecting switch
		SW103	Deck lifter upper limit detecting switch

Table 14-601a (side paper deck)

2. Motors, Solenoids, and PCBs

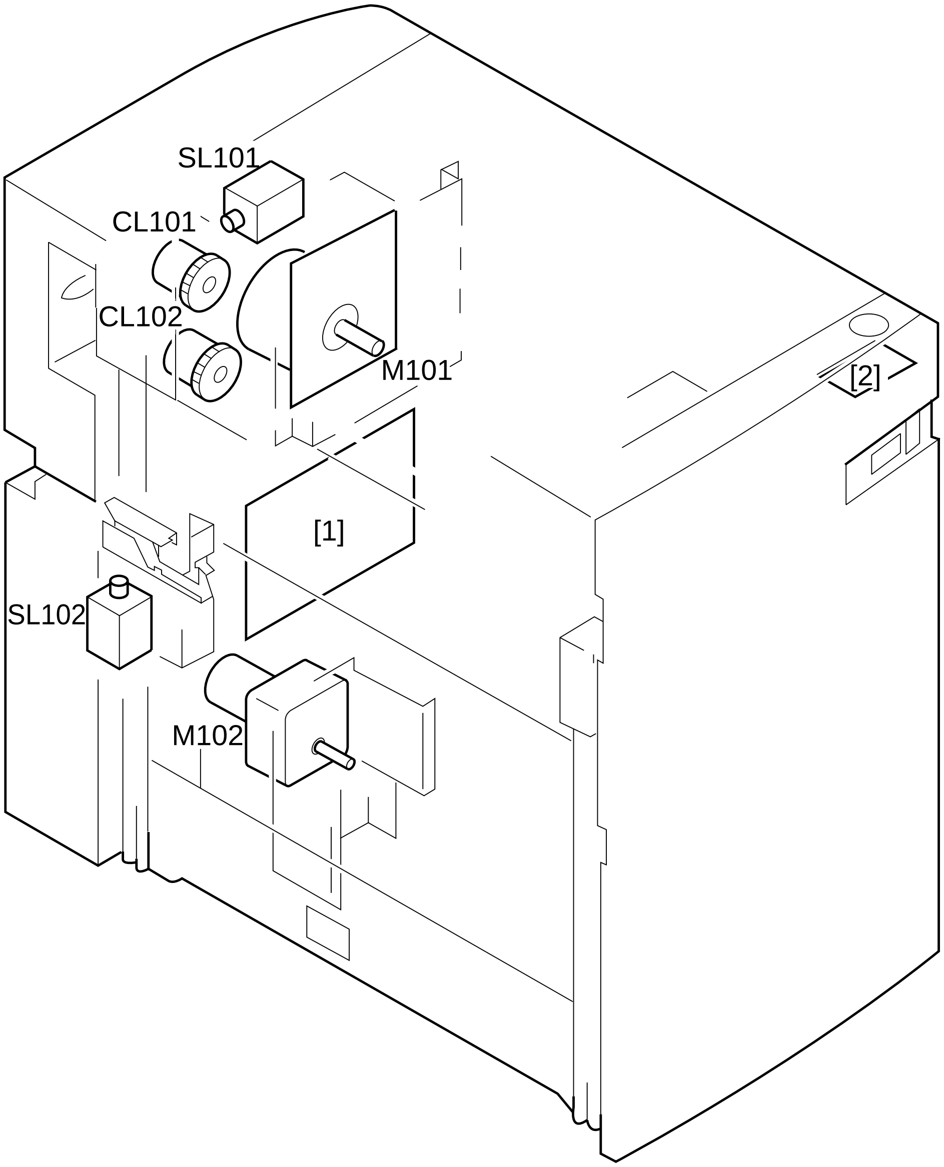

SL101
CL101
CL102
M101
[2]
[1]
SL102
M102

Figure 14-607b (side paper deck)

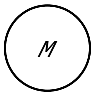
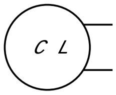
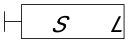
Symbol	Part	Notation	Function
	Motor	M101	Deck main motor
		M102	Deck lifter motor
	Clutch	CL101	Deck vertical path clutch
		CL102	Deck pick-up clutch
	Solenoid	SL101	Deck pick-up roller releasing solenoid
		SL102	Deck open solenoid
	PCB	[1]	Side deck driver PCB
		[2]	Open switch PCB

Table 14-601b (side paper deck)

H. Variable Resisters, Light-Emitting Diodes, and Check Pins by PCB

Of the variable resistors (VR), light-emitting diodes (LED), and check pins used in the machine, those needed in the field are discussed.

Caution:

1. Some LEDs emit dim light when they are off because of leakage current. This is a normal condition, and must be kept in mind.
2. VRs that may be used in the field.
   :●
   VRs that must not be used in the field.
   :⊘

Caution:

Those VRs and check pins not listed in the tables are for factory use only, requiring special tools and high accuracy. Do not touch them in the field.

1. Image Processor PCBs (main controller)

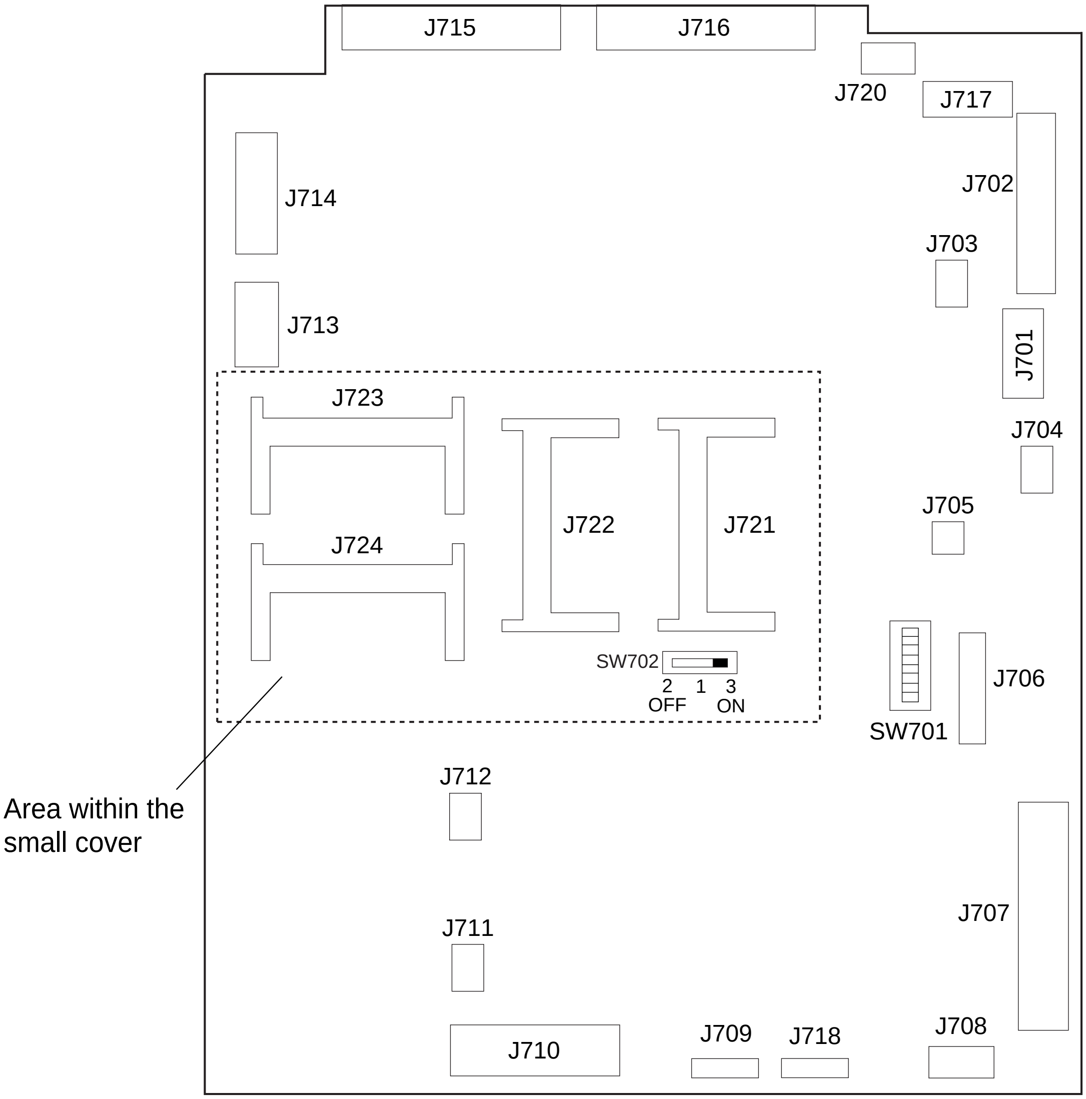

J715
J716
J720
J717
J714
J702
J703
J713
J701
J723
J704
J705
J722
J721
J724
SW702
2 1 3
OFF ON
J706
SW701
J712
Area within the small cover
J711
J707
J709
J718
J708
J710

Figure 14-608

J721:	Flash ROM slot for the IP-CPU (IP, DIMM); use the bottom slot for a 4-MB DIMM, and the top slot for a 1-MB DIMM.
J722:	Flash ROM slot for the DC-CPU (DCC DIMM); 1-MB, DIMM
K723, J724:	Slot for expansion memory (32 MB each); however, be sure to use J723 first (as when installing only one DIMM).
J720:	Not used.

- SW701 States

	AB	Inch	AB/Inch	A
SW1	OFF	ON	ON	OFF
SW2	OFF	OFF	ON	ON
SW3	OFF	ON	OFF	ON
SW4	OFF	OFF	ON	ON
SW5	OFF	ON	OFF	OFF
SW6	OFF	OFF	OFF	ON

- Size Configuration
Use service mode to set the appropriate size (COPIER>OPTION>BODY>MODEL-SZ).

	MODEL-SZ setting
AB	0
Inch	1
A	2
AB/Inch	3

The setting will affect the following items:
• Pattern for default enlargement/reduction.
• Size detection by the feeder. (If the setting under FEEDER>OPTION>SIZE-SW in service mode is '1', AB/Inch detection will be made regardless of the country of installation.

- Arrangement of the Original Sensor
The arrangement of original sensors may be changed. If the feeder is used, these switch settings need not be changed, since detection will be by the feeder. For sensor arrangement, see "Identifying the Size of Originals" in Chapter 3.
Use SW5 and SW6.

	AB	Inch
AB	OFF	OFF
Inch	ON	OFF
A	OFF	ON

2. DC Controller PCB (DC driver)

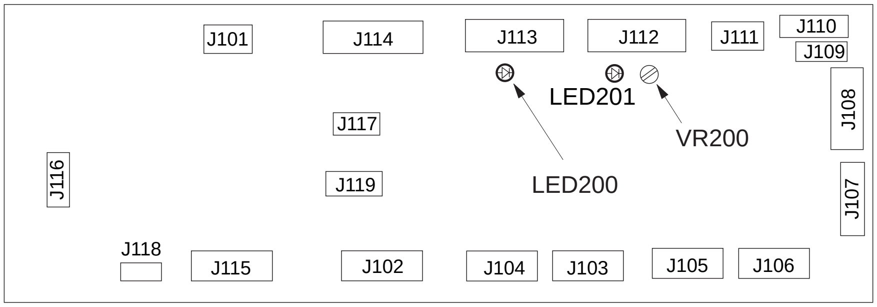
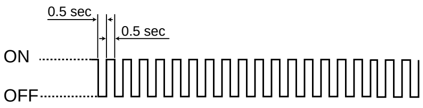
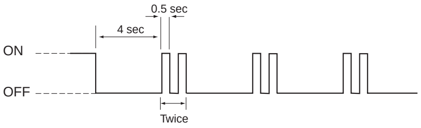
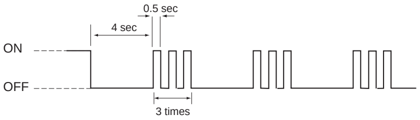
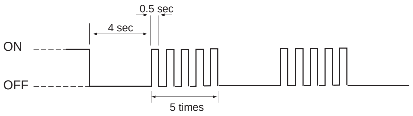
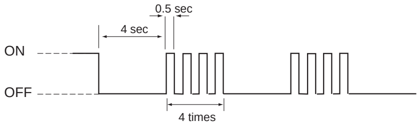
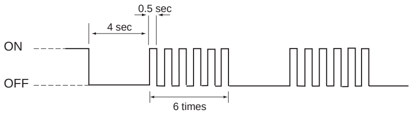

J101
J114
J113
J112
J111
J110
J109
J108
LED201
VR200
J117
J119
LED200
J116
J107
J118
J115
J102
J104
J103
J105
J106

Figure 14-609

LED200:	Check it to find out the state of the composite power supply PCB is indicated by flashing at different intervals. For details, see Table 13-601.
VR200:	Turn it to adjust the lamp intensity used when shading auto correction (FUNCTION>CCD>MAN-ADJ) is executed in service mode. The result is good if LED201 turns on. Its adjustment range is equal to 3 rotations. If LED201 does not turn on after a single rotation, try rotating it in the opposite direction.
LED201:	Check it to find out whether VR200 is correctly adjusted (it should turn on).

States and LED Flashing Intervals

Flashing intervals	State	Description
◆ Flashes at 0.5-sec intervals 	Normal	The composite power supply PCB is operating normally.
◆ OFF for 4 sec; then, flashes twice at 0.5-sec intervals 	Over-current/over-voltage detected	An over-current/over-voltage condition has been detected in the +24-VU or +24-VR output. An over-current condition has been detected because of wire trapping or the like. ■ The control panel indicates 'E803'.
◆ OFF for 4 sec; then, flashes 5 times at 0.5-sec intervals. 	Error in communication with the DC controller PCB	An error has occurred in communication between the DC controller PCB and the composite power supply PCB, not updating the communication data for 8 sec or more. Note that this error may not flash/turn on LED100 on the DC controller PCB. • The output of the main transformer stops. • The control panel indicates 'E191'.
◆ OFF for 4 sec; then, flashes 3times at 0.5-sec intervals. 	Low-voltage control error* in standby	In standby, the difference between the +24-VR setting and the actual control value is larger than indicated. • The output of the main transformer stops. • Error data is sent to the DC controller PCB. • The control panel indicates 'E803'.
◆ OFF for 4 sec; then, flashes 4 times at 0.5-sec intervals. 	Low-voltage control error* during copying	During copying, the difference between the +24-VR setting and the actual control value is larger than indicated. • +24 VR is set to standby voltage (+18 VR). • Error data is sent to the DC controller PCB. • The control panel indicates 'E803'.
◆ OFF for 4 sec; then, flashes 6 times at 0.5-sec intervals. 	DC controller PCB check sum Error detection	The CPU on the DC controller PCB has detected a check sum of communication data twice or more continuously. • The output of the main transformer stops. • The control panel indicates 'E191'.

* The same error can occur owing to activation error in the fluorescent lamp (because of deterioration over time). If the LED flashes in threes or fours, check to see if the glass around the filament on both sides of the lamp is not black.

3. Composite Power Supply CPB

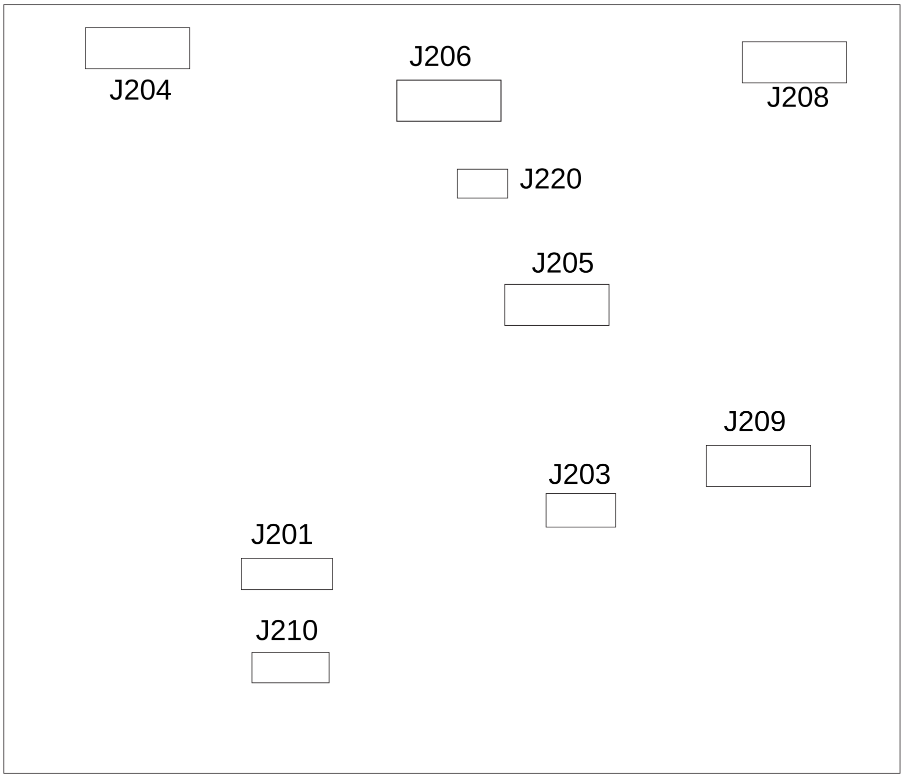


Figure 14-610

Label: Enter the values indicated on the label in service mode when replacing the composite power supply CPB.

OFST-DC	xx
AGS-GAIN	xxx
AGS-OFST	xxx
OFST1-AC	xxx
FL-OFST	xxx

Table 14-611 Label on the Composite Power Supply PCB

4. Deck Driver (side paper deck)

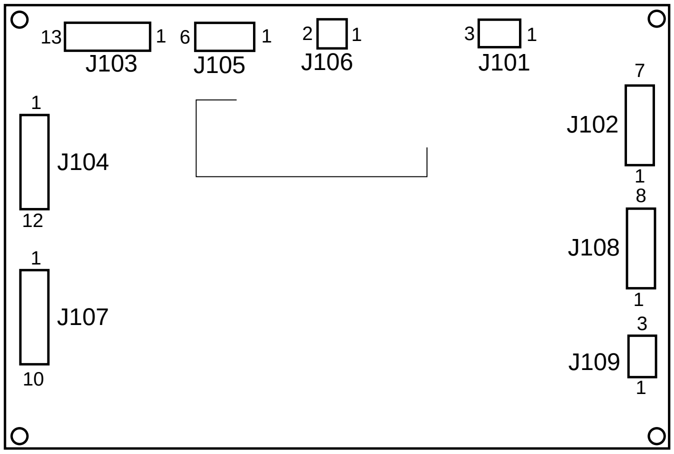

13
1
J103
6
1
J105
2
1
J106
3
1
J101
7
J102
1
1
J104
12
8
J108
1
1
J107
10
3
J109
1

Figure 14-611

VII. UPGRADING

The machine may be upgraded in either of the following two ways:

- By replacing the DIMM on the image processor PCB.
- By updating the DIMM contents through downloading from a computer.

A. Replacing the DIMM

The DIMM (flash ROM) used in the machine comes in two types; both types are mounted on the image processor PCB. Figure 14-701 shows a view in which the IP small cover has been removed:

- DIMM for the IP-CPU
  4 MB: bottom of 2-layer slot
  1 MB: top of 2-layer slot
- DC-CPU DIMM (1 MB)

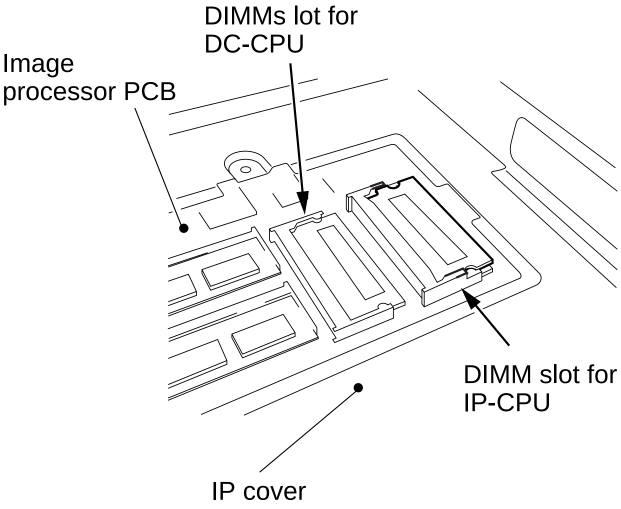


Figure 14-701

1. Removing the DIMM

1) Turn off the main power switch, and disconnect the power cord.
2) Remove the copyboard glass; then, remove the screw, and detach the small cover from the IP cover.

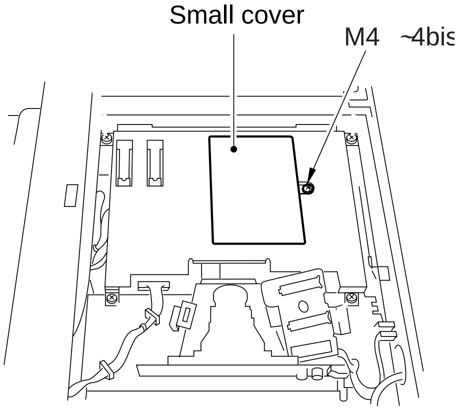

Small cover
M4 ~4bis

Figure 14-702

3) Open the slot claw, and pull off the DIMM as if to lift it.

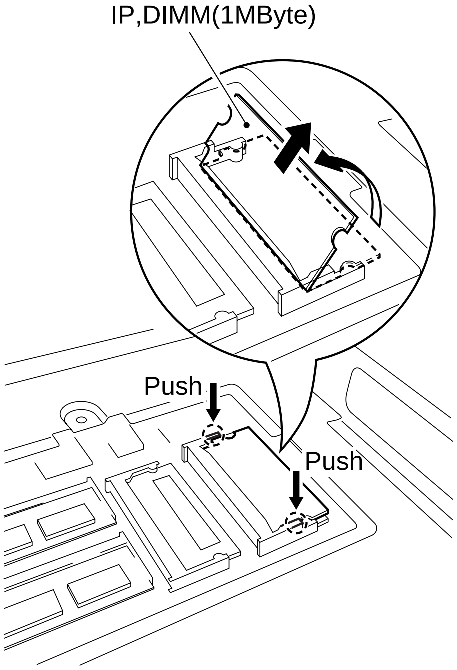

IP,DIMM(1MByte)
Push
Push

Figure 14-703

2. Mounting the DIMM

1) Check the DIMM slot on the IP PCB. The wrong slot can cause malfunction; pay attention. (Figure 14-701)
2) Insert the DIMM into the slot at an angle. At this time, check to be sure that the DIMM is fully inserted into the slot.
3) Shift down the DIMM until the claw of the slot clicks into position.
   At this time, shift the DIMM with care. Forcing it in can damage the DIMM or the claw on the slot.

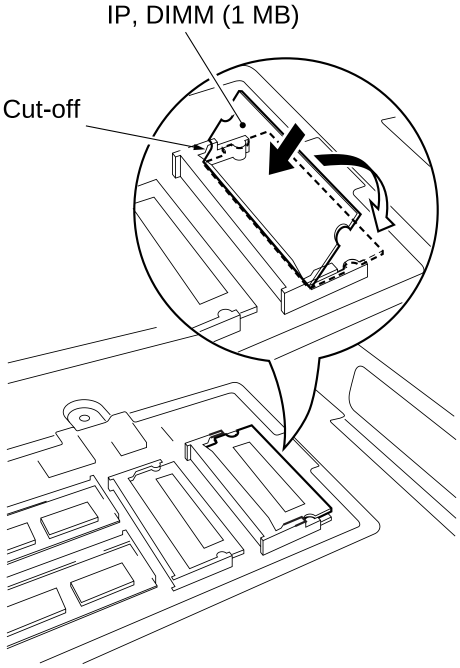


Figure 14-704

4) Mount the IP small cover (M4x4 screw, 1 pc.); then, mount the copyboard cover. Connect the power cord, and turn on the main power supply.

B. Downloading

1. Before Starting the Work

Obtain the following:

- PC to which the downloading tool (service tool) has been installed.
- Bi-Centronics cable (with an IEEE 1284 Standard-compliant marking)

2. Downloading

a. Connection

- Check to make sure that the communication memory lamp is off.

1) Turn off the machine's main power switch; then, disconnect the power plug, and disconnect the modular cable (telephone).
2) Open the front door, and open the connector cover for downloading.

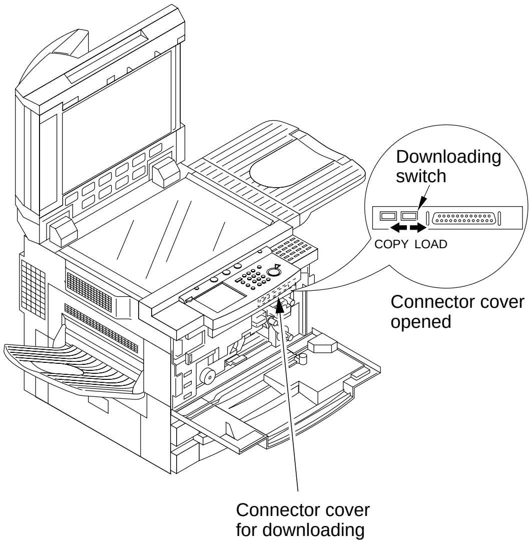

Downloading switch
COPY
LOAD
Connector cover opened
Connector cover for downloading

Figure 14-705

3) Connect the machine to the PC with a bi-Centronics cable.

- Make sure that the PC is off.
- Connect the 25-pin connector of the cable to the PC, and 36-pin connector to the machine.

4) Slide the switch to LOAD.

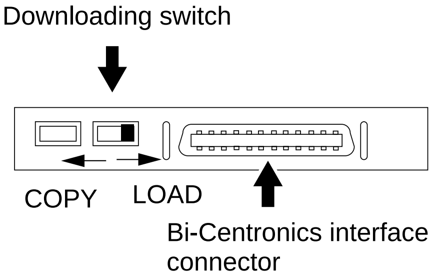

Downloading switch
COPY
LOAD
Bi-Centronics interface connector

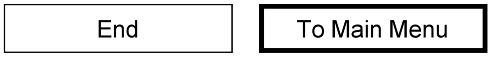
Figure 14-706

5) Turn on the PC, and start the downloading tool.

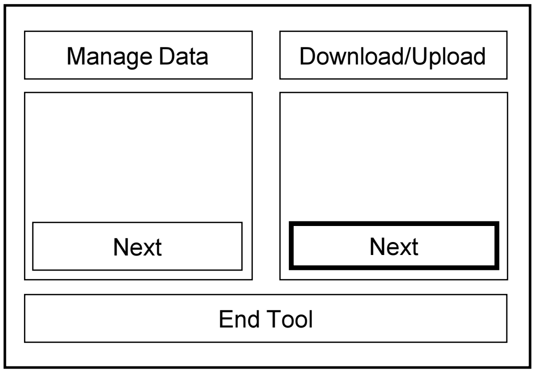
6) Connect the machine's power plug to the power outlet, and turn on the main power switch.

b. Downloading

1) Select 'To Main Menu' in response to the start-up message of the downloading tool.


End
To Main Menu

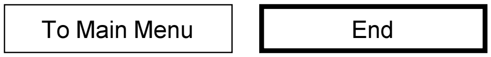
2) Select 'Next' under the Download/Upload.


Manage Data
Download/Upload
Next
Next
End Tool

3) Click the model and PCB for downloading.
IP: DIMM for the IP-CPU
DC-CON: DIMM for the DC-CPU

4) Start upgrading the flash ROM following the instructions on the PC screen.

5) When downloading is done, operate as follows to turn off the PC:
OK → To Main Menu → End Tool → End


To Main Menu
End

c. After Downloading
1) Turn off the machine's main power switch, and disconnect the power plug.
2) Disconnect the bi-Centronics cable from the PC and the machine.
3) Slide the download switch to COPY.

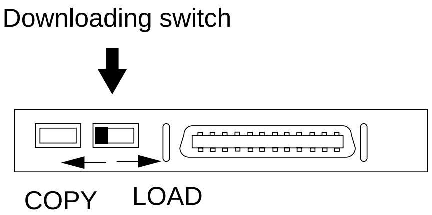


Figure 14-707

4) Close the connector cover, and close the front door.
5) If the machine is equipped with fax functions, connect the modular cable.
6) Turn on the main power switch.
7) Start service mode, and check the ROM version.
   COPIER> DISPLAY>**VERSION**

VIII. SERVICE MODE

A. Outline

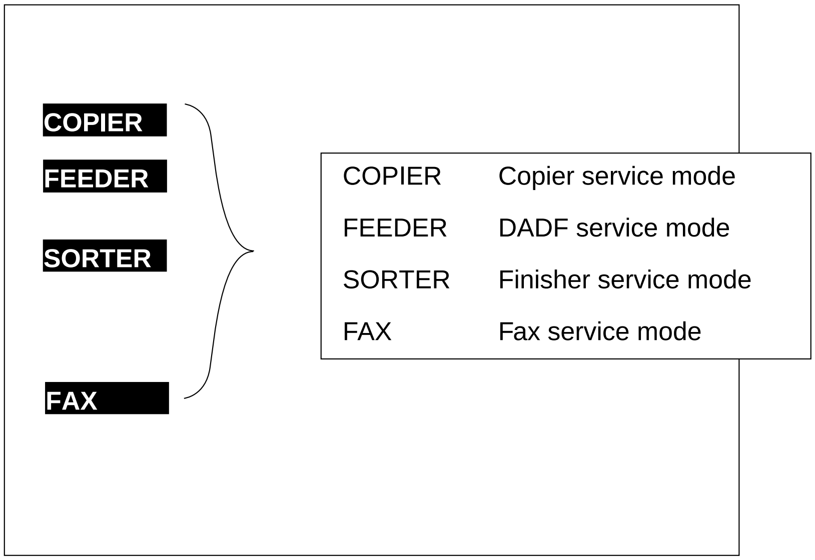
The machine's service mode is divided into the following seven:

Cause	Step	Check
1	DISPLAY	Display Mode
2	I/O DISPLAY	I/O Display Mode
3	ADJUST	Adjustment Mode
4	FUNCTION	Function Mode
5	OPTION	Setting Mode
6	TEST	PG Test Mode
7	COUNTER	Counter Mode

Table 14-801

1. Starting Service Mode and Making Selections

1) Press the asterisk key '⊛' on the control panel.
2) Press '2' and '8' on the keypad at the same time.
3) Press the asterisk key '⊛' on the control panel.
   - The display changes to the screen shown in Figure 14-801, indicating the connected accessories (FEEDER, SORTER, FAX).



COPIER	Copier service mode
FEEDER	DADF service mode
SORTER	Finisher service mode
FAX	Fax service mode

Figure 14-801

2. Ending Service Mode

Press the Reset key once to return to the Service Mode Initial screen (Figure 14-801).
Press the Reset key twice to end service mode and return to the User screen (standard).

3. Backing Up the RAM

The RAM data may be backed up in either of the following two ways:

Service Label:	The label is found on the left side of the back of the front cover (Figure 14-802). Each machine is adjusted at the factory, and the adjustment values are recorded in the label.
List Print:	The command generates a back-up output of ADJUST, OPTION, and COUNTER. COPIER>FUNCTION>MISC-P>**P-PRINT**

- When Replacing the Image Processor PCB
  Enter the values indicated in the list print obtained before replacement.
- When Replacing the Composite Power Supply PCB
  Enter the values indicated on the label attached to the composite power supply.

COPIER/ADJUST		Factory	1	2	COPIER/ADJUST		Factory	1	2
Service Date					Service Date				
LAPM	FL-OFST				HV-PRI	AGS-GAIN			
	FL-DUTY					AGS-OFST			
	FL-PDUTY					OFST1-DC			
AE	AE-TBL					OFST1-AC			
ADJ-XY	ADJ-X					OFST2-AC			
	ADJ-Y					P-AC2			
	ADJ-S					P-AC3			
					HV-TR	TR-N1			
CCD	PPR					TR-N2			
	W-PLT					TR-OFST			
						TR-SPP			
LASER	PVE-OFST								
	LA-OFF				FEED-ADJ	REGIST			
						LOOP-CST			
						LOOP-MF			
DEVELOP	DE-DC					ADJ-REFE			
	DE-NO-DC					RVS-FD1			
	DE-OFST					RVS-FD2			
						RVS-DUP			
DENS	DENS-ADJ								
					CST-ADJ	MF-A4R			
HV-PRI	P-DC					MF-A6R			
	P-NO-DC					MF-A4			
	P-AC								
	P-NO-AC								
Boby No.				Date.			FB4-3277		

Figure 14-802 Service Label

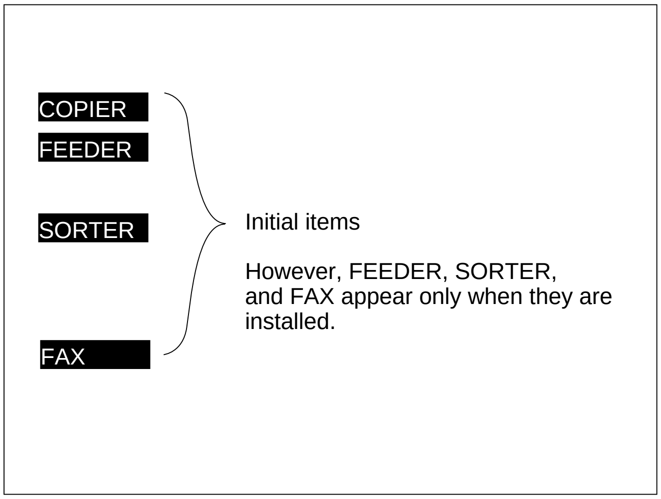
OFST-DC	xx
AGS-GAIN	xxx
AGS-OFST	xxx
OFST1-AC	xxx
FL-OFST	xxx

Figure 14-802 Label on the Composite Power Supply PCB

4. Basic Operation

The screen design consists of three layers: Level 1, Level 2, and Level 3 screens.

a. Initial Screen


COPIER
FEEDER
SORTER
FAX

Initial items

However, FEEDER, SORTER, and FAX appear only when they are installed.

Figure 14-804

- An initial item is selected when the highlighted notation is pressed.

b. Level 1/Level 2 Screen

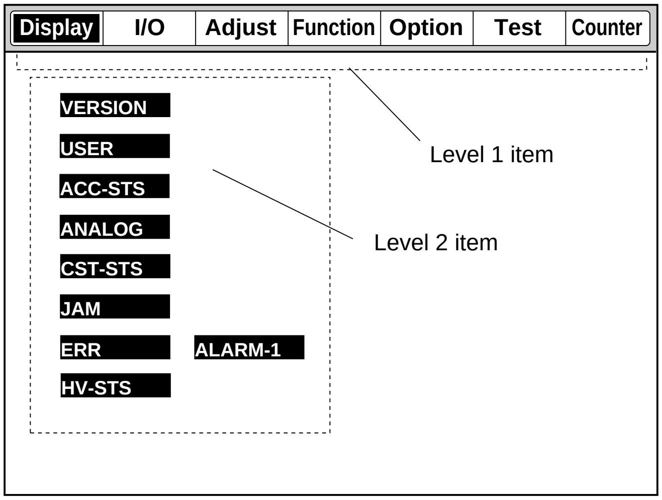
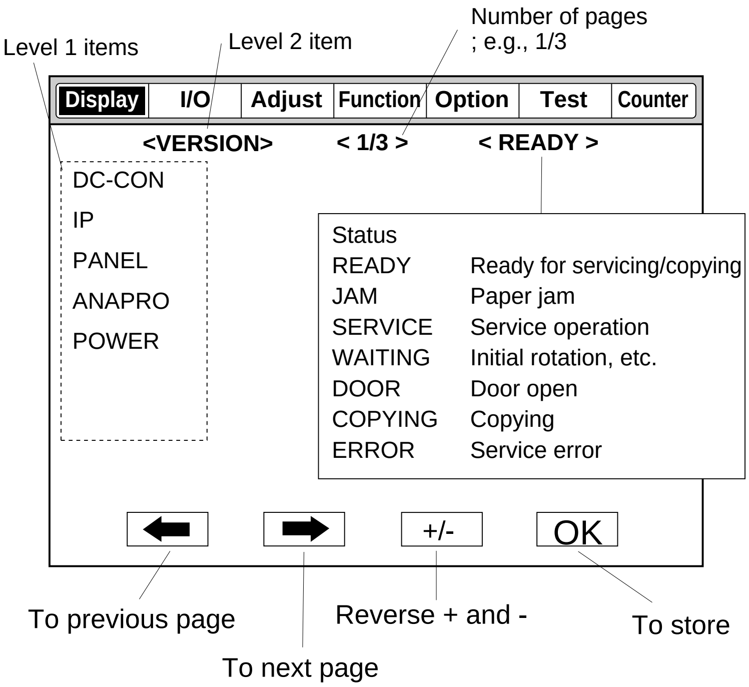

Display
I/O
Adjust
Function
Option
Test
Counter
VERSION
USER
ACC-STS
ANALOG
CST-STS
JAM
ERR
ALARM-1
HV-STS
Level 1 item
Level 2 item

Figure 14-805

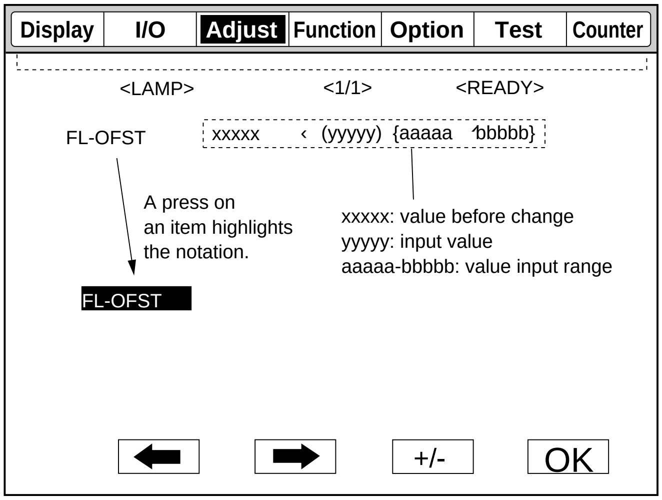
- To select a Level 1 item, press an item at the top of the screen.
- To select a Level 2 item, press a highlighted item.

c. Level 3 Screen


Level 1 items
Level 2 item
Number of pages
; e.g., 1/3
Display
I/O
Adjust
Function
Option
Test
Counter
<VERSION>
< 1/3 >
< READY >
DC-CON
IP
PANEL
ANAPRO
POWER
+/-
OK
To previous page
Reverse + and -
To store
To next page

Status	
READY	Ready for servicing/copying
JAM	Paper jam
SERVICE	Service operation
WAITING	Initial rotation, etc.
DOOR	Door open
COPYING	Copying
ERROR	Service error

Figure 14-806


Display
I/O
Adjust
Function
Option
Test
Counter
<LAMP>
<1/1>
<READY>
FL-OFST
xxxxx ‹ (yyyyy) {aaaaa ´bbbbb}
A press on
an item highlights
the notation.
FL-OFST
+/-
OK

xxxxx: value before change
yyyyy: input value
aaaaa-bbbbb: value input range

Figure 14-807

- A level 3 item may be selected by pressing it, and the selection is indicated by highlighting the item.

d. Selecting a Screen

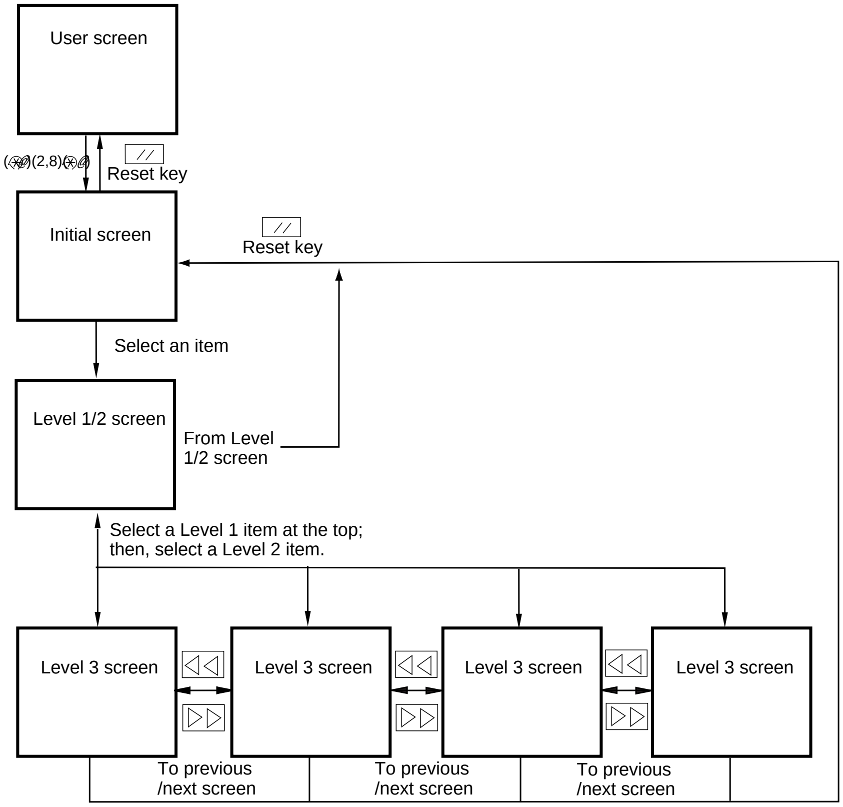

User screen
(※)(2,8)(※)
//
Reset key
Initial screen
//
Reset key
Select an item
Level 1/2 screen
From Level
1/2 screen
Select a Level 1 item at the top;
then, select a Level 2 item.
Level 3 screen
Level 3 screen
Level 3 screen
Level 3 screen
◁◁
▷▷
◁◁
▷▷
◁◁
▷▷
To previous
/next screen
To previous
/next screen
To previous
/next screen

Figure 14-808

e. Guide to Keys
1. Keypad
   Use it to enter a numeral (0 through 9).
2. User Mode Key
   Use it to start user mode.
3. Reset Key
   Use it to end service mode.
4. Stop Key
   Use it to stop ongoing operation.
5. Clear Key
   Use it to initialize settings in service mode or software counter readings.
6. Copy Start Key
   Use it to make copies without ending service mode after making adjustments.
7. Previous Page Key
   Use it to return to the previous page.
8. Next Page Key
   Use it to move to the next page.
9. +/- Key
   USe it to switch between + and -.
10. OK Key
    Use it to store an input value.

B. DISPLAY Control Display Mode

Figure 14-809 shows the DISPLAY mode Level 2 screen and its items.

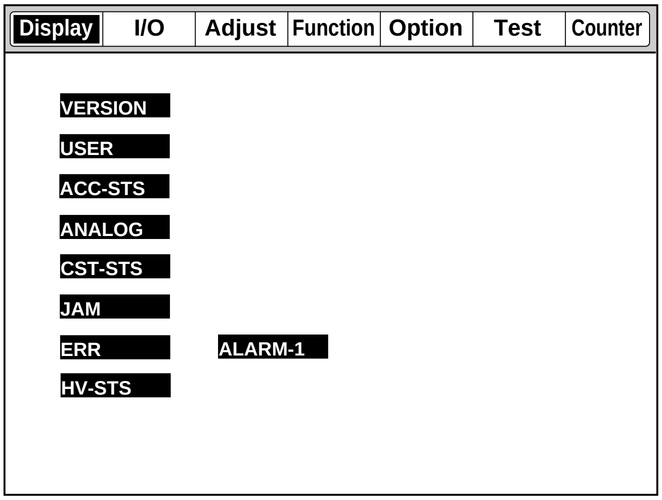

Display
I/O
Adjust
Function
Option
Test
Counter
VERSION
USER
ACC-STS
ANALOG
CST-STS
JAM
ERR
ALARM-1
HV-STS

Figure 14-809 DISPLAY Level 2 Screen

DISPLAY Items

Level 1	Level 2	Level 3	Outline
DISPLAY	VERSION	DC-CON	Indicates the DIMM version of the DC controller PCB.
		IP	Indicates the DIMM version of the image processor PCB.
		PANEL	Indicates the ROM version of the control panel controller PCB.
		POWER	Indicates the ROM version of the composite power supply PCB.
		FEEDER	Indicates the ROM version of the feeder controller PCB.
		SORTER	Indicates the ROM version of the sorter controller PCB.
		PS-PCL	Indicates the version of the ROM of the PS-PCL board.
		LIPS	Indicates the ROM version of the LIPS board.
		SCSI	Indicates the version of the ROM on the SCSI Board.
		SDL-STCH	Indicates the version of the ROM of the saddle.
	USER	LANGUAGE	Indicates the ROM version of the LIPS board.
		COUNTER	Indicates the selected language.
	ACC-STS	FEEDER	Indicates the counter control type for the copy counter.
		SORTER	Indicates the connection of a feeder.
		DECK	Indicates the connection of the sorter.
		CARD	Indicates the connection of the paper deck.
		PCB	Indicates the connection of the control card.
		RAM	Indicates the connection of various boards (accessories*).
	ANALOG	TEMP	Indicates the total size of the RAM recognized by the machine.
		HUM	Indicates the machine internal temperature (environment sensor).
		ABS-HUM	Indicates the machine internal humidity (environment sensor).
		DR-TEMP	Indicates the absolute humidity.
		FIX-C	Indicates the drum ambient temperature (drum ambient temperature sensor).
	CST-STS	WIDTH-C1	Indicates the temperature of the upper fixing roller (main thermistor).
		WIDTH-C2	Indicates the width of the paper in the cassette 1 and the output of the paper size sensor.
		WIDTH-C3	Indicates the width of the paper in the cassette 2 and the output of the paper size sensor.
		WIDTH-C4	Indicates the width of the paper in the cassette 3 and the output of the paper size sensor.
		WIDTH-C5	Indicates the width of the paper in the cassette 4 and the output of the paper size sensor.
		WIDTH-C6	Indicates the width of the paper in the cassette 5 and the output of the paper size sensor.
		WIDTH-MF	Indicates the width of the paper in the cassette 6 and the output of the paper size sensor.
		WIDTH-DK	Indicates the width of paper in the multifeeder and the output of the paper size sensor.
	JAM		Indicates the width of paper in the deck and the output of the paper size sensor.
	ERR		Indicates the jam history.
	HV-STS	PRIMARY	Indicates the error history.
		BIAS	Indicates the current value (A) of the primary charging roller.
		TR-V	Indicates the developing bias DC value (V).
	ALARM1	DF	Indicates the ATVAC value.
		SORTER	Indicates the most recent alarm of the feeder.
			Indicates the most recent alarm of the sorter.

* Varies depending on the country.

<VERSION>
Indicates the ROM version of the machine and the accessories PCBs.

Level 3	Description	Remarks
DC-CON	DIMM version f the DC controller PCB	Notation: xx, yy xx: version number yy: R&D control number
IP	DIMM version of the image processor PCB	
PANEL	ROM version of the control panel controller PCB	
POWER	ROM version of the composite power supply PCB	
FEEDER	ROM version of the feeder controller PCB	
SORTER	ROM version of the sorter controller PCB	
PS-PCL	ROM version of the PS-PCL board.	
LIPS	ROM version of the LIPS board (not used.)	
SCSI	ROM version of the SCSI board	
SDL-STCH	ROM version of the saddle stitcher controller PCB	

<USR>
Indicates the items related to the User screen and the user.

Level 3	Description	Remarks
LANGUAGE	Notation: **<LANGUAGE AA.BB.CC.DD>** Indicates the selected language. AA: country code (not used in the machine) BB: language code CC: site code (See Table 14-803-1.) DD: Paper configuration code (Table 14-802)	
COUTER	Notation: **<COUNTER EE>** Indicates the type of copy counter count control. EE: Counter code detail (Table 13-803)	

Paper Configuration Code: DD

Code	Configuration
00	AB
01	Inch
02	A
03	AB/Inch

Table 14-802

Type Code: EE

Code	Counter 1	Counter 2	Counter 3
00	Total	Pint total	
01	Total		Fax print
10	Copy total		Fax print
11	All sizes		

Table 14-803

Site Code: CC

Code	Model
00	Common model
01	Canon model

Table 14-803-1

<ACC-STS>
Indicates accessory connection.

Level 3	Description	Remarks
FEEDER	Feeder connection	0: not connected. 1: connected.
SORTER	Sorter connection	
DECK	Paper deck connection (if the paper deck is required or not)	0: disable operation. The cable of the paper deck is connected to the copier, but the deck is not recognized by the copier. 1: enable operation. The paper deck is fully recognized by the copier; or, no paper deck is installed to the copier as an accessory.
CARD	Control card connection (if a control card is required)	0: disable operation. (The control card function is effective, but no card is set.) 1: enable operation. (A control card is set; or, the control card function is not effective.)
PCB	Accessory board connection Indicates the number of the board recognized by the copier.	1: Network board 2: not used. 3: Standard board 3: Standard memory (always 1) 4: Printer 5: SCSI board 6: G3FAX board 7: G3FAX (expansion) board
RAM	Indicates the size of the RAM recognized by the machine. If standard, 32 MB; with 1 addition, 64 MB; with 2 additions, 96 MB. Note: that any first addition must be installed to J723.	

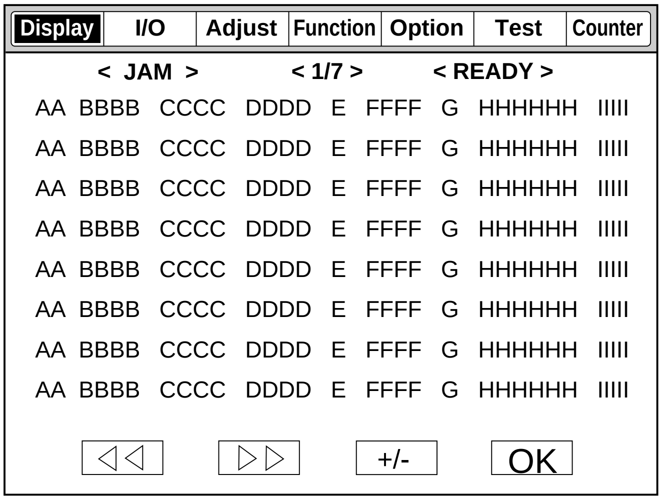
<ANALOG>
Indicates the analog sensor readings.

Level 3	Description	Remarks
TEMP	Machine internal temperature (environment sensor)	°C
HUM	Machine relative humidity (environment sensor)	% RH
ABS-HUM	Machine absolute humidity (environment sensor) Indicates in terms of g of water in 100 m3 of air.	g
DR-TEMP	Photosensitive drum ambient temperature	°C
FIX-C	Upper fixing roller temperature (°C) Indicates the temperature detected by the main thermistor (TH1). Normally, controlled to 195°C.	°C

<CST-STS>
Indicates the use of cassettes and multifeeder.

Level 3	Description	Remarks
WIDTH-C1	Indicates the width (mm) of paper in the cassette 1 and paper size.	Indicates paper widths in whole numbers, omitting decimal places.
WIDTH-C2	Indicates the width (mm) of paper in the cassette 1 and paper size.	
WIDTH-C3	Indicates the width (mm) of paper in the cassette 1 and paper size.	
WIDTH-C4	Indicates the width (mm) of paper in the cassette 1 and paper size.	
WIDTH-C5	Indicates the width (mm) of paper in the cassette 1 and paper size.	
WIDTH-C6	Indicates the width (mm) of paper in the cassette 1 and paper size.	
WIDTH-MF	Indicates the width (mm) of paper in the multifeeder and paper size.	
WIDTH-DK	Indicates the width (mm) of paper in the deck and paper size.	

<JAM>
Indicates jam data.



```
      <  JAM  >             < 1/7 >           < READY >
AA  BBBB   CCCC   DDDD   E   FFFF   G   HHHHHH   IIIII
AA  BBBB   CCCC   DDDD   E   FFFF   G   HHHHHH   IIIII
AA  BBBB   CCCC   DDDD   E   FFFF   G   HHHHHH   IIIII
AA  BBBB   CCCC   DDDD   E   FFFF   G   HHHHHH   IIIII
AA  BBBB   CCCC   DDDD   E   FFFF   G   HHHHHH   IIIII
AA  BBBB   CCCC   DDDD   E   FFFF   G   HHHHHH   IIIII
AA  BBBB   CCCC   DDDD   E   FFFF   G   HHHHHH   IIIII
AA  BBBB   CCCC   DDDD   E   FFFF   G   HHHHHH   IIIII
```

Figure 14-810

Level 3	Description	Remarks
AA	Order of jam (larger, the less recent)	1 to 50 (50 max.)
BBBB	Day of occurrence	Moth, day; 2 digits each
CCCC	Time of occurrence	24-hour notation
DDDD	Time of recovery	24-hour notation
E	Location: 0 for copier, 1 for feeder, 2 for sorter.	
FFff	Jam code First 2 digits (FF): type of jam (Table 14-804) Last 2 digits (ff): sensor detecting the jam (Table 14-805)	
G	Pick-up position (Table 14-805-1)	
HHHHHH	Pick-up holder software counter reading	
IIIII	Paper size	

Jam Type

Code	Type
01xx	Delay jam
02xx	Stationary jam
03xx	Timing jam
04xx	Protection jam
10xx	Residual jam at power-on
11xx	Do open during copying
12xx	Double feeding

See Table 14-805-2.

Table 14-804

G. Pick-Up Position

Code	Source
1	Cassette 1
2	Cassette 2
3	Cassette 3
4	Cassette 4
5	Cassette 5
6	Cassette 6
7	Paper deck
8	Multifeeder
9	Duplexing assembly

Table 14-805-1

Sensor

Code	Sensor
xx01	Pre-registration sensor
xx02	Vertical path 1 sensor
xx03	Vertical path 2 sensor
xx04	Cassette 1 pick-up sensor
xx05	Cassette 2 pick-up sensor
xx06	Cassette 3 pick-up sensor
xx07	Cassette 4 pick-up sensor
xx08	Cassette 5 pick-up sensor
xx09	Cassette 6 pick-up sensor
xx0A	Deck pick-up sensor
xx0B	Pre-registration paper sensor for multifeeder
xx31	Internal delivery sensor
xx32	Bin 1 delivery sensor
xx33	Bin 2 delivery sensor
xx34	Bin 3 delivery sensor
xx35	Bin 3 inlet sensor
xx36	Fixing assembly outlet sensor
xx37	Bin 1 delivery sensor via reversal delivery
xx38	Bin 2 delivery sensor via reversal delivery
xx39	Bin 3 delivery sensor via reversal delivery
xx3A	Bin 3 inlet sensor via reversal delivery
xx61	Duplexing assembly inlet sensor
xx62	Re-pick, up sensor

Table 14-805

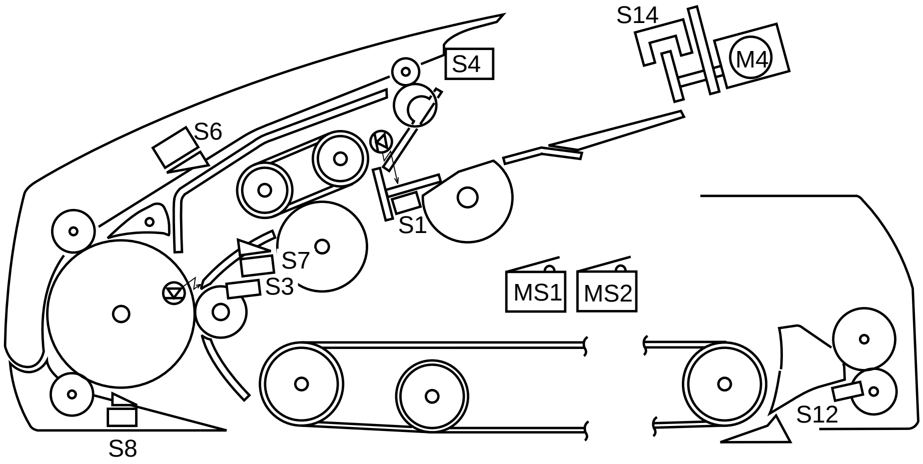
Logic Jams

	Description	Correction
9004	The communication between the IP-CPU and the DC-CPU is faulty.	Remove the paper. Open and close the front cover.
9005	The communication between the finisher and the image processor PCB is faulty.	
9006	An excess volume of paper is placed in the Finisher-E1 at the start of copying or printing.	Remove the paper from the delivery tray.

Table 14-805-2

- Jam Detection by the DADF

DISPLAY



S1 ...... Original tray paper sensor	S6 ...... Delivery sensor 1	S12 .... Delivery sensor 2
S3 ...... Registration paper sensor	S7 ...... Pick-up sensor	S14 .... Recirculating sensor
S4 ...... Upper cover sensor	S8 ...... Reverse sensor	MS1 .. RF switch
		MS2 .. Upper cover switch

Figure 14-810-1

	Jam type	Sensor	Description	Code
Pick-up	Original out	S1, S7	After the pick-up motor M1 has turned on, the sensor S7 does not detect the leading edge of an original and, in addition, the sensor S1 does not detect an original.	0001
	Pick-up delay	S7	After the pick-up motor M1 has turned on, the sensor S7 does not detect the leading edge of an original in 1500 msec.	0002
	Registration delay	S3, S7	After the sensor S7 has detected the leading edge of an original, the sensor S3 does not detect the leading edge of an original in 350 msec.	0003

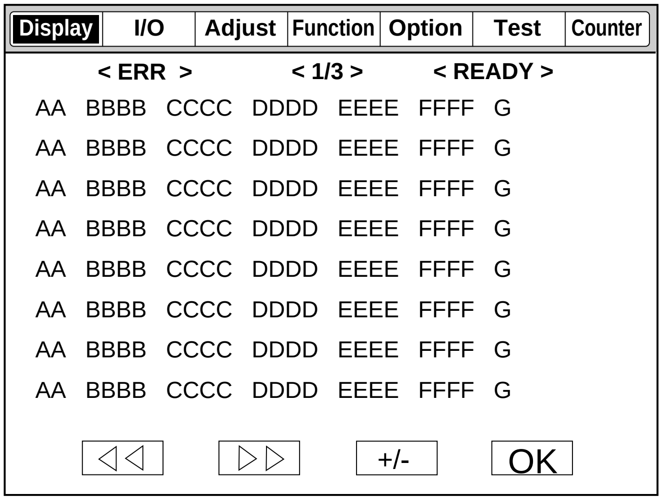
Table 14-805-2

	Jam type	Sensor	Description	Code
Pick-up	Double feeding	S3	When the 1st original is set on the copyboard glass, the sensor S3 detects an original.	0006
	Original leading edge retreat	S3	When starting original pick-up, the sensor S3 does not detect the leading edge of an original.	0008
Reversal	Reversal delay 1	S8	When reversing or delivering an original, the sensor S8 does not detect the leading edge of an original 140 mm or 225 msec after the belt motor M3 has started to rotate clockwise.	0011
	Reversal stationary	S8	When reversing or delivering an original, the sensor S8 does not detect the leading edge of an original after a reversal delay has been checked.	0012
	Reversal delay 2	S8	When delivering or picking up an original, the original (to be delivered) is moved back to the copyboard glass together with the original being picked up, causing the sensor S8 to fail to detect the preceding original 50 mm after the belt motor starts to rotate counterclockwise.	0013
	Reversal initial paper	S8	When reversing an original, the sensor S8 detects an original.	0020
	Reversal pick-up delay	S3	When reversing an original, the sensor S3 does not detect the leading edge of the reversed original in 100 mm or 300 msec after the sensor S8 has detected the original.	0032
	Reversal pick-up stationary	S3	After the sensor S8 has turned on and a feed length of 'original size + 180 mm', the sensor S3 does not detect the trailing edge of the reversed original.	0023
Delivery	Delivery delay	S6	When delivering an original, the sensor S6 does not detect an original in 100 mm or 250 msec after the sensor S8 has detected the leading edge of an original.	0041
	Delivery stationary	S6	After a check for reversal stationary, the sensor S6 does not detect the trailing edge of an original in 100 mm or 250 msec.	0042
	DADF open	MS1	The DADF is opened while it is in operation.	0081
	Upper cover open	MS2 S4	The upper cover is opened while the DADF is in operation.	0082
	Original re-circulating	S1	The sensor S1 does not detect the original delivered to the original tray.	0083
	Jam original	S6, S3 S8, S7	At the start of original pick-up, the sensor S6, S3, or S8 (or S7 if the paper stopper is up) detects an original.	0084
	Residual original	S8	When picking up the 1st original, an original is detected on the copyboard glass.	0088
	Re-circulating bar idle swing (2nd original and later)	S14	For the 2nd and subsequent originals, the re-circulating lever rotated without coming into contact with an original.	0089

Table 14-805-3

Jam type	Sensor	Description	Code
Delivery failure	S3, S6	When delivering an original in lower separation pick-up mode, the original on the pick-up side is not stopped (e.g., the original being picked up is longer than the original being delivered).	008A
DADF open	MS1	The DADF is opened while the copier is at reset because of the absence of copy paper.	0091
Upper cover open	MS2, S4	The upper cover is opened while the copier is at rest because of the absence of copy paper.	0092
Re-circulating lever idle swing	S13	The re-circulating lever moved off existing originals during original pick-up.	0093

<ERR>
Indicates error codes/alarm codes



```
        < ERR >              < 1/3 >          < READY >
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G
```

Figure 14-811

Level 3	Description	Remarks
AA	Error number (larger, less recent)	1 to 20 (20 max.)
BBBB	Date of occurrence	Month, day
CCCC	Time of occurrence	24-hour notation
DDDD	Time of recovery	24-hour notation
EEEE	Error code (Exxx)	
FFFF	Detail code E01, E004, E805 has detail code.	If none, '0000'.
G	Location: 0 for copier, 2 for feeder, 2 for sorter/finisher.	

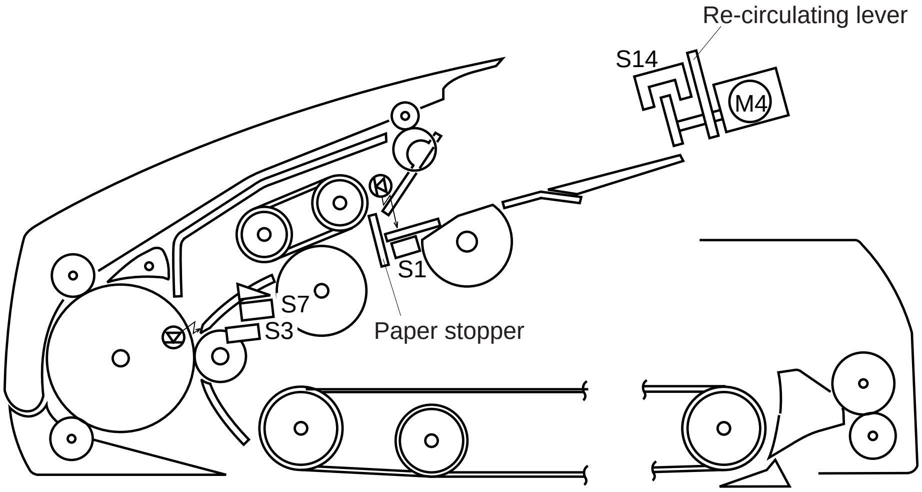
For descriptions of each error code, see IX. Self Diagnosis in Chapter 14.

<ALARM1>
Indicates the most recent alarms for the sorter and the feeder.

Level 3	Description	Remarks
DF	Indicates the most recent alarm for the feeder. I no alarm, indicates '00'. For the DADF alarms, see the following pages.	
SORTER	Indicates the most recent alarm for the finisher/saddle finisher. SORTER: aa bb cc dd aa: stapler alarm for the finisher bb: stapler alarm of the saddle finisher cc: stack alarm dd: tray alarm	

■ DADF Alarms

DISPLAY


Re-circulating lever
S14
M4
S1
S7
S3
Paper stopper

S1 ...... Original tray paper sensor
S3 ...... Registration paper sensor
S7 ...... Pick-up sensor
S14 .... Re-circulating sensor

Figure 14-811-1

Original placement	Sensor	Description	RDF operation	Code
Re-circulating lever idle swing	S1	Immediately after the re-circulating lever motor M4 has operated, the re-circulating lever swung idly without coming into contact with an original.	The on-going operation stops immediately upon detection.	01
Pick-up fault	S7	At time of pick-up, the sensor S7 does not detect the leading edge of an original in 1500 ms.	The separation belt, feeding roller, and pick-up roller stop immediately. The DADF stops after discharging the copy of the preceding original.	03
Paper stopper overriding	S7	When being placed, the original has overridden the paper stopper.	The ongoing operation stops immediately upon detection.	05
Number of originals	S3	After jam removal, the number of originals set on the original tray has changed; see Note: number of originals copied > number of originals on the tray	The ongoing operation stops immediately upon detection.	11
Number of originals	S3	The re-circulating lever does not fall on the original tray for some reason, not enabling detection of the last original. Reference: Normally, as many as 50 sheets of A5, STMT, A4, B5, or LTR may be placed; or, 25 sheets of A3, B4, 279x432-mm (11"x17"), or LGL.	As many as 100 sheets are counted, and the operation stops.	12
Original out	S14	The re-circulating lever has fallen to the original tray while an original is being processed.	Stops immediately upon detection.	13
Original size	S3	The size of the original which has been picked up is not of a default size.	Stops immediately upon detection.	14
Original size, Mixed sizes (in reduce image composition)	S3	[1] The original which has been picked up is of a size not supported by reduce image composition mode. [2] The original which has been picked up is of a size different from the first original.	Stops immediately upon detection.	15

Note: To reset, remove the originals form the original tray, and open the DADF.

Table 14-805-4

<HV-STS>
Indicates the measurements of voltage and current.

Level 3	Description	Remarks
PRIMARY	Current applied to the primary charging roller.	Unit: µA; about 200 µA
BIAS	Developing bias Dc value	Unit: V
TR-V	ATVC detection voltage If the level of 'TR-V' is 30 to 100, transfer is assumed to be normal.	Unit: V

C. I/O Operation Check Mode

Figure 14-812 shows the Level 2 screen and its items.

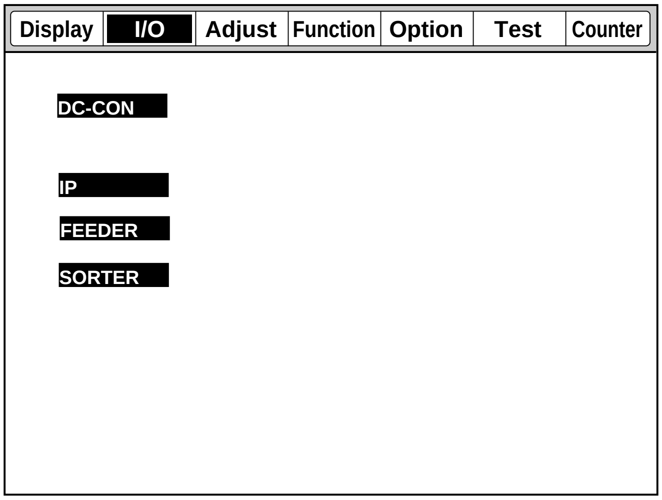

Display
I/O
Adjust
Function
Option
Test
Counter
DC-CON
IP
FEEDER
SORTER

Figure 14-812 I/O Level 2 Screen

I/O
- DC-CON —— P001 to P027
- IP —— P001 to P011
- FEEDER —— P001 to P010
- SORTER —— P001 to P024

1. DC-CON

Address	bit	Display	Signal	Connector	Action
P001	bit0	duplexing reversal motor A	M10A	J114-A12	
	bit1	duplexing reversal motor A*	M10A*	J114-A11	
	bit2	duplexing reversal motor B	M10B	J114-A14	
	bit3	duplexing reversal motor B*	M10B*	J114-A13	
	bit4	lower feeder motor A	M6A	J114-B8	
	bit5	lower feeder motor A*	M6A*	J114-B7	
	bit6	lower feeder motor B	M6B	J114-B10	
	bit7	lower feeder motor B*	M6B	J114-B9	
	bit8	3-bin motor A	3BMA	J110-12	
	bit9	3-bin motor A*	3BMA*	J110-11	
	bit10	3-bin motor B	3BMB	J110-13	
	bit11	3-bin motor B*	3BMB*	J110-14	
	bit12				
	bit13				
	bit14				
	bit15				
P002	bit0	pick-up motor 12A	M5_A	J108-A6	
	bit1	pick-up motor 12A*	M5_B	J108-A7	
	bit2	pick-up motor 12B	M5_M0	J108-A8	
	bit3	pick-up motor 12B*	M5_M1	J108-A9	
	bit4	horizontal registration motor phase A	SIDE_A	J102-A3	
	bit5	horizontal registration motor phase A*	SIDE_A*	J102-A4	
	bit6	horizontal registration motor phase B	SIDE_B	J102-A5	
	bit7	horizontal registration motor phase B*	SIDE_B*	J102-A6	
	bit8	delivery motor phase A	M8_A	J106-8	
	bit9	delivery motor phase A*	M8_A*	J106-9	
	bit10	delivery motor phase B	M8_B	J106-12	
	bit11	delivery motor phase B*	M8_B*	J106-13	
	bit12	delivery reversal motor A	M7_A	J107-11	
	bit13	delivery reversal motor A*	M7_A*	J107-10	
	bit14	delivery reversal motor B	M7_B	J107-13	
	bit15	delivery reversal motor B*	M7_B*	J107-12	

DC-CON

Address	bit	Display	Signal	Connector	Action
P003	bit0	main motor clock detection	M1LCK	J114-A12	STBY 1, ON 0
	bit1	laser scanner motor clock detection	M4LK	J114-A1	STBY 1
	bit2	fixing motor lock detection	M2LK	J114-A14	STBY 1, ON 0
	bit3	toner sensor	TS1S	J114-A13	STBY 1
	bit4	waste toner sensor	PS14S	J114-B8	STBY 1
	bit5			J114-B7	
	bit6			J114-B10	
	bit7			J114-B9	
	bit8			J110-12	
	bit9			J110-11	
	bit10			J110-13	
	bit11	left door open/closed sensor	PS13S	J110-14	when open, 0; when closed, 1.
	bit12	copyboard cover open/closed sensor	PS2S		when open, 0; when closed, 1.
	bit13	right door open/closed sensor	PS12S		when open, 0; when closed, 1.
	bit14	front door open/closed sensor	FDOOR_PD*		when open, 1; when closed, 0.
	bit15	24 VR detection	(24V)		when open, 1; when closed, 0.
P004	bit0	cassette 1 pick-up sensor	PS18S	J108-A6	when paper is present, 1; absent, 0.
	bit1	cassette 2 pick-up sensor	PS19S	J108-A7	when paper is present, 1; absent, 0.
	bit2	No. 2 registration sensor	PS11S	J108-A8	when paper is present, 1; absent, 0.
	bit3	registration sensor	PS4S	J108-A9	when paper is present, 1; absent, 0.
	bit4			J102-A3	
	bit5	1-bin delivery sensor	PS7S	J102-A4	when paper is present, 1; absent, 0.
	bit6	2-bin delivery sensor	3BEX2	J102-A5	
	bit7	3-bin delivery sensor	3BEX3	J102-A6	
	bit8	reversal delivery sensor	PS6S	J106-8	When paper is present, 0; absent, 1.
	bit9	fixing assembly outlet sensor	PS40S	J114-A2	when paper is present, 1; absent, 0.
	bit10	re-pick up sensor	PS9S	J106-12	when paper is present, 0; absent, 1.
	bit11	horizontal registration sensor	PS10S	J102A-8	when edge is detected, 0.
	bit12	3-bin shift tray HP sensor	3BMHPS	J107-11	
	bit13			J107-10	
	bit14	3-bin inlet sensor	3BINLT	J107-13	
	bit15	duplexing assembly inlet sensor	PS8S	J107-12	when paper is present, 0; absent, 1.

DC-CON

Address	bit	Display	Signal	Connector	Action
P005	bit0	main motor drive	M1D*	J102-B11	when 0, ON.
	bit1	pre-exposure lamp drive	PED	J112-A1	
	bit2	laser scanner motor drive	M4D	J104-A2	
	bit3	registration roller clutch	CL1D	J102-B4	
	bit4	vertical path 12 clutch drive	CL3D*	J108-A4	
	bit5	developing clutch	CL4D*	J102-B8	
	bit6	multifeeder pick-up clutch	CL2D*	J102-B2	
	bit7	multifeeder solenoid	SL3D*	J102-B6	
	bit8	pick-up 12 solenoid drive	SL1D*	J108-A5	
	bit9	primary charging roller solenoid	SL6BK	J104-A7	
	bit10	delivery flapper solenoid	SL2D*	J106-7	
	bit11	3-bin delivery flapper solenoid	SBLSLD	J110-10	
	bit12	3-bin flapper solenoid	3BSLD*	J110-9	
	bit13	3-bin shift motor drive	3BMD_F	J110-8	
	bit14	fixing motor drive	M2D*	J115-A6	
	bit15	cleaning belt solenoid	SL5D	J115-A4	
P006	bit0	scanner motor step switch signal 0		-	
	bit1	scanner motor step switch signal 1		-	
	bit2	scanner motor step switch signal 2		-	
	bit3	scanner motor step switch signal 3		-	
	bit0	scanner motor current control signal 0		-	
	bit5	scanner motor current control signal 1		-	
	bit6	scanner motor hold control signal		-	
	bit7	intensity sensor level setting		-	
	bit8				
	bit9				
	bit10	fixing assembly inlet guide solenoid (pull: down)	SL6	J104-A4	
	bit11	fixing inlet guide solenoid (back: up)	SL6BK	J104-A5	
	bit12				
	bit13				
	bit14				
	bit15	reversing guide cooling fan	FM9D	J106-4	

DC-CON

Address	bit	Display	Signal	Connector	Action
P007	bit0	multifeeder sensor	PS3S	J108-B17	when paper is present, 0; absent, 1.
	bit1				
	bit2				
	bit3				
	bit4				
	bit5				
	bit6				
	bit7				
	bit8				
	bit9				
	bit10				
	bit11				
	bit12	3-bin ID		J110-15	
	bit13				
	bit14				
	bit15				
P008	bit0	cassette 1 size detection bit 0	CS1B0	J115-B4	
	bit1	cassette 1 size detection bit 1	CS1B1	J115-B5	
	bit2	cassette 1 size detection bit 2	CS1B2	J115-B6	
	bit3	cassette 1 size detection bit 3	CS1B3	J115-B7	
	bit4	cassette 1 size detection bit 4	CS1B4	J115-B8	
	bit5	cassette 2 size detection bit 0	CS2B0	J115-B10	
	bit6	cassette 2 size detection bit 1	CS2B1	J115-B11	
	bit7	cassette 2 size detection bit 2	CS2B2	J115-B12	
	bit8	cassette 2 size detection bit 3	CS2B3	J115-B13	
	bit9	cassette 2 size detection bit 4	CS2B4	J115-B14	
	bit10	cassette 1 paper sensor	UPPD	J108-A10	when paper is present, 0; absent, 1.
	bit11	cassette 2 paper sensor	LWPD	J108-A11	when paper is present, 0; absent, 1.
	bit12	cassette 1 paper level detection bit 0	1RPD0	J108-A13	
	bit13	cassette 1 paper level detection bit 1	1RPD1	J108-A14	
	bit14	cassette 2 level detection bit 0	2RPD0	J108-A15	
	bit15	cassette 2 level detection bit 1	2RPD1	J108-A16	

DC-CON

Address	bit	Display	Signal	Connector	Action
P009	bit0	primary	HVPDC*	J103-B4	
	bit1	developing DC	HDCON*	J103-B1	
	bit2	developing AC	HACON*	J103-B1	
	bit3				
	bit4	static eliminator	SEPON*	J103-B3	
	bit5				
	bit6	primary charging mode	HVPH*	J103-B11	
	bit7	developing DC mode	HDCH*	J103-B10	
	bit8	transfer mode 00	HVTM00*	J103-B5	
	bit9	transfer mode 01	HVTM01*	J103-B6	
	bit10	transfer mode 02	HVTM02*	J103-B7	
	bit11	transfer mode 03	HVTM03*	J103-B8	
	bit12	transfer mode 04	HVTM04*	J103-B9	
	bit13				
	bit14				
	bit15	relay shut-off drive	RELAY_D	J104-B11	when in error, '0'.
P010	bit0	feeding fan	FM1D	J115-A1	
	bit1				
	bit2	fixing heat discharge fan 1 (full speed) fixing heat discharge fan 2	FM2D FM3D	J107-A4 J107-A7	
	bit3	fixing heat discharge fan 1 (half speed) fixing heat discharge fan 2	FM2D FM3D	J107-A4 J107-A7	
	bit4				
	bit5				
	bit6	reader cooling fan 1 reader cooling fan 2 scanner motor cooling fan	FM12D FM13D FM18D	J104-B5 J104-B8 J104-A11	
	bit7				
	bit8	laser driver cooling fan laser scanner motor cooling fan (full speed) cleaner heat discharge fan	FM4D FM5D - FM7D	J112-B7 J112-A7 - J112-B13	
	bit9	laser scanner fan laser scanner motor cooling fan (half speed) cleaner heat discharge fan	FM4D FM5D - FM7D	J112-B7 J112-A7 - J112-B13	
	bit10	cartridge cooling fan system cooling fan (full speed) DC controller cooling fan	FM6D FM8D FM7D	J112-A10 J112-B16 J112-A13	

Address	bit	Display	Signal	Connector	Action
P010	bit11	cartridge coiling fan system cooling fan (half speed) DC controller cooling fan	FM6D FM8D FM17D	J112-A10 J112-B16 J112-A13	
	bit12	low-voltage power supply cooling fan 1 low-voltage power supply cooling fan 2	FM10D FM11D	J118-1 J118-4	
	bit13				
	bit14	drum cartridge cooling fan 1 drum cartridge cooling fan 2 (full speed) drum cartridge cooling fan 3	FM14D FM15D - FM16D	J119-9 J119-5 - J119-3	
	bit15	drum cartridge cooling fan 1 drum cartridge cooling fan 2 (half speed) drum cartridge cooling fan 3	FM14D FM15D - FM16D	J119-9 J119-5 - J119-3	
P011	bit0	fan rotation detection (fixing heat discharge fan 1)	FM2LK	J107-5	
	bit1	fan rotation detection 2 (fixing heat discharge fan 2)	FM3LK	J107-8	
	bit2	fan rotation detection 3 (laser scanner motor cooling fan)	FM4LK	J112-B8	
	bit3	fan rotation detection 4 (laser diver cooling fan)	FM5LK	J112-A8	
	bit4	fan rotation detection 5 (cleaner heat discharge fan)	FM7LK	J112-B14	
	bit5	fan rotation detection 6 (system cooling fan)	FM8LK	J112-B17	
	bit6	fan rotation detection 7 (DC controller cooling fan)	FM17LK	J112-B11	
	bit7	fan rotation detection 8 (cartridge cooling fan)	FM6LK	J112-A11	
	bit8	fan rotation detection 9 (drum cartridge cooling fan 1)	FM14LK	J119-2	
	bit9	fan rotation detection 10 (drum cartridge cooling fan 2)	FM15LK	J119-5	
	bit10	fan rotation detection 11 (drum cartridge cooling fan 3)	FM16LK	J119-8	

Address	bit	Display	Signal	Connector	Action
P011	bit11	fan rotation detection 12 (low-voltage power supply cooling fan 1)	FM10LK	J118-2	
	bit12	fan rotation detection 13 (low-voltage power supply cooling fan 2)	FM11LK	J118-3	
	bit13	fan rotation detection 14 (reader cooling fan 1)	FM12LK	J104-B6	
	bit14	fan rotation detection 15 (reader cooling fan 2)	FM13LK	J104-B9	
	bit15	fan rotation detection 16 (scanner motor cooling fan)	FM18LK	J104-A9	
P012	bit0	main heater SSR short circuit detection	H1_ERR	J114-B11	upon detection, '1'.
	bit1	sub heater SSR short circuit detection	H2_ERR	J114-B14	upon detection, '1'.
	bit2	sub thermistor error detection		-	
	bit3	sub thermistor phase detection		-	
	bit4	counter 1 open circuit detection		-	
	bit5	counter 2 open circuit detection		-	
	bit6	counter 3 open circuit detection		-	
	bit7				
	bit8	fixing relay shut-off 0 (main thermistor)		-	when in error, '1'.
	bit9	fixing relay shut-off 1 (sub thermistor)		-	
	bit10	fixing relay shut-off 2 (SSR short circuit)		-	
	bit11				
	bit12				
	bit13				
	bit14				
	bit15				

2. IP

P001	bit 0	not used	
	bit 1	hardware version	
	bit 2	not used	
	bit 3	hardware version	
	bit 4	hardware version	
	bits 5 to 7	not used	
P002		not used	
P003	bit 0, bit 1	not used	
	bit 2	Indicates the connection of the SCSI board to the fax motherboard.	0: SCSI board not connected 1: SCSI boar connected
	bit 3	Indicates the connection of the AX board to the fax motherboard.	0: FAX board not connected 1: FAX board connected
	bit 4	Indicates the connection of the PDL I/F board to the FAX motherboard.	0: PDL I/F not connected 1: PDL I/F board connected
	bits 5 to 7	not used	
P004 to P007		not used	
P008	bit0	not used	
	bit1	control panel reset	0: reset disabled 1: reset enabled
	bit2	control panel back light	0: OFF 1: ON
	bit3	not used	
	bit4	DC controller PCB LED201	0: OFF 1: ON
	bit5	laser bias output	0: ON 1: OFF
	bit6	control card count	0: OFF 1: ON
	bit7	not used	
P009 to P011		not used	

Indicates the hardware version of the image processor PCB in respect of combinations of the states of bits 1, 3, and 4 (P001):

<bit1, bit3, bit4>=<0, 0, 1> System supported

3. FEEDER

Address	bit	Display	Remarks
P001	bit0	stopper plate solenoid (SL1) drive	when 1, ON.
	bit1	paper deflecting plate solenoid (SL3) drive	when 1, ON.
	bit2	stamp solenoid (SL4) drive	when 1, ON.
	bit3	belt motor (M3) rotation direction signal	when right delivery, '1'.
	bit4	PCB signal	
	bit5	PCB signal	
	bit6	PCB signal	
	bit7	PCB signal	
P002	bit0	reversal sensor (S8)	when paper is present, '1'.
	bit1	delivery sensor (S8)	when paper is present, '1'.
	bit2	pick-up sensor (S7)	when paper is present, '1'.
	bit3	not used	
	bit4	PCB signal	
	bit5	PCB signal	
	bit6	not used	
	bit7	not used	
P003	bit0	PCB signal	
	bit1	PCB signal	
	bit2	PCB signal	
	bit3	PCB signal	
	bit4	PCB signal	
	bit5	recirculatio sensor (S14)	when paper is present , '1'.
	bit6	PCB signal	
	bit7	PCB signal	
P004	bit0	feeder motor clock sensor (S9)	in rotation, repeats '0' an '1'.
	bit1	belt motor clock sensor (S10)	in rotation, repeats '0' an '1'.
	bit2	registration roller clock sensor (S11)	in rotation, repeats '0' an '1'.
	bit3	delivery motor clock sensor (S3)	in rotation, repeats '0' an '1'.
	bit4	pick-up roller sensor (S5)	when at home position, '1'.
	bit5	not used	
	bit6	not used	
	bit7	not used	

Address	bit	Display	Remarks
P005	bit0	PCB signal	
	bit1	PCB signal	
	bit2	PCB signal	
	bit3	PCB signal	
	bit4	PCB signal	
	bit5	PCB signal	
	bit6	not used	
	bit7	not used	
P006	bit0	PCB signal	
	bit1	PCB signal	
	bit2	belt motor (M3) rotation speed signal	changes between '0' and '1' according to speed.
	bit3	belt motor (M3) dive signal	when '1', ON.
	bit4	feeder motor (M2) rotation speed signal	changes between '0' and '1' according to speed.
	bit5	PCB signal	
	bit6	pick-up motor (M1) rotation speed signal	changes between '0' and '1' according to speed.
	bit7	pick-up motor (M1) drive signal	when '1', ON.
P007	bit0	delivery motor (m5) rotation speed signal	changes between '0' and '1' according to speed.
	bit1	pick-up motor (M1) rotation direction signal	in top separation, '1'.
	bit2	recirculatio motor (m5) drive signal	when '1', ON.
	bit3	original indicator LD (LD101, LED102)	when '0', ON.
	bit4	PCB signal	
	bit5	brake (BK) drive	when '1', ON.
	bit6	clutch (CL) drive	when '1', ON.
	bit7	paper holding plate solenoid (SL2)	when '1', ON.
P008	bit0	PCB signal	
	bit1	not used	
	bit2	DADF switch (MS1)	when DADF is open, '0'.
	bit3	upper cover switch (MS2), upper cover sensor (S4)	when upper cover is open, '0'.
	bit4	delivery sensor (S12)	when paper is present, '1'.
	bit5	SW3 on DADF controller PCB	when pressed, '1'.
	bit6	SW2 on DADF controller PCB	when pressed, '1'.
	bit7	SW1 on DADF controller	when pressed, '1'.

Address	bit	Display	Remarks
P009	bit0	not used	
	bit1	not used	
	bit2	not used	
	bit3	not used	
	bit4	not used	
	bit5	not used	
	bit6	LED1 on DADF controller PCB	when '0', ON.
	bit7	LED2 on DADF controller PCB	when '0', ON.
P010	bit0	DSW1-8 on DADF controller PCB	when '1', ON.
	bit1	DSW1-7 on DADF controller PCB	when '1', ON.
	bit2	DSW1-6 on DADF controller PCB	when '1', ON.
	bit3	DSW1-5 on DADF controller PCB	when '1', ON.
	bit4	DSW1-4 on DADF controller PCB	when '1', ON.
	bit5	DSW1-3 on DADF controller PCB	when '1', ON.
	bit6	DSW1-2 on DADF controller PCB	when '1', ON.
	bit7	DSW1-1 on DADF controller PCB	when '1', ON.

4. SORTER (Finisher C1, Saddle Finisher C2, Finisher E1)

For details, see the individual Service Manuals.

a. Finisher

Address	bit	Display	Signal	Connector	Action
P000 (input)	bit0	stapler connection detection signal	STPCNT	J8-7	L: connected.
	bit1	stapler absent detection signal	HOOKEMP	J8-10	L: staple present.
	bit2	inlet paper detection signal	PENT	J6-7	L: paper present.
	bit3	shutter open detection signal	STOPN	J7-3	H: closed.
	bit4	swing guide open detecting switch signal	SWGGOPN	J5-12	L: closed.
	bit5	tray upper limit detecting switch signal	TRKYLIM	J5-8	H: upper limit.
	bit6	tray safety switch signal	TRAYSAFE	J5-6	H: safe.
	bit7	front door open detecting switch signal	FDROPN	J5-3	L: closed.
P001 (input)	bit0	-			
	bit1	-			
	bit2	-			
	bit3	-			
	bit4	feeder motor phase A output		J10-6	
	bit5	feeder motor phase B output		J10-5	
	bit6	feeder motor phase A* output		J10-4	
	bit7	feeder motor phase B output		J10-3	
P002 (input)	bit0	alignment motor phase A output		J11-5	
	bit1	alignment motor phase B output		J11-4	
	bit2	alignment motor current switch			
	bit3	-			
	bit4	-			
	bit5	-			
	bit6	-			
	bit7	-			
P003 (input)	bit0	buffer path paper sensor connector detection			H: connected.
	bit1	buffer inlet paper sensor connector detection			H: connected.
	bit2	front cover open/closed sensor connector detection			H: connected.
	bit3	shift motor clock sensor connector detection			H: connected.
	bit4	-			
	bit5	-			
	bit6	-			
	bit7	-			

Address	bit	Display	Signal	Connector	Action
P004 (input)	bit0	LED1 ON signal (output) Note 2	TRIND	J13-1	H: ON.
	bit1	tray lift motor clock sensor 1			
	bit2	feeder motor clock			
	bit3	tray lifter motor clock sensor			
	bit4	shutter open sensor connector detection			H: connected.
	bit5	-			
	bit6	-			
	bit7	-			
P005	bit0	stapler shift motor current switch (output)			L: ON.
	bit1	feeder motor current switch (output)			L: ON.
	bit2	stack detection start signal (output)			H: detection start.
	bit3	height sensor (input)			
	bit4	staple cartridge detection (input)		J8-10	H: staple present.
	bit5	height sensor clock (input)			
	bit6	-			
	bit7	-			
P006 (input)	bit0	shutter closed detection signal	STOPN	J9-9	H: open.
	bit1	tray home position detection signal	TRYHP	J12-6	H: HP.
	bit2	LED2 ON signal (output)			L: ON.
	bit3	delivery motor clock signal		J9-14	
	bit4	front door open detection signal	FDR	J15-3	L: open.
	bit5	delivery detection signal	PDEL	J9-11	H: HP.
	bit6	buffer path paper detection signal	BUFPASS	J15-9	L: paper present.
	bit7	buffer path inlet paper detection signal	BUFENTR	J15-6	H: paper present.
P007 (output)	bit0	delivery motor PWM			L: ON.
	bit1	delivery motor reverse rotation drive output		J11-7	L: CCW.
	bit2	tray lifter motor PWM			L: ON.
	bit3	delivery motor CW rotation output		J11-6	L: CW.
	bit4	tray lifter motor descent drive output			H: down.
	bit5	tray lift motor ascent drive output			H: up.
	bit6	stapler shift motor phase A output			
	bit7	stapler shift motor phase B output			

Address	bit	Display	Signal	Connector	Action
P008 (input)	bit0	stapler motor CW rotation output		J8-14	H: CW.
	bit1	stapler motor CCW rotation output		J8-13	H: CCW.
	bit2	stapler tray paper detection signal		J9-3	H: paper present.
	bit3	joint detection signal	STPTY	J12-3	H: connected.
	bit4	stapler drive home position detecting signal	JOINT	J8-8	
	bit5	swing guide open detection signal	STPDRHP	J6-10	L: open.
	bit6	stapler home position detecting signal	SWGOPN	J12-9	L: HP.
	bit7	alignment plate home position signal	STPHP	J9-6	L: HP.
P009 (output)	bit0	stapler edge position detection signal	JOGHP	J8-6	L: staple present.
	bit1	thermal switch signal	HOOKTOP	J12-14	H: overheating.
	bit2	tray 1 paper sensor connector detection	THMSW		H: connected.
	bit3	tray 2 paper sensors connector detection			H: connected.
	bit4	tray 3 paper sensor connector detection			H: connected.
	bit5	tray 1 paper detection signal		J14-3	L: paper peasant.
	bit6	tray 2 paper detection signal	FSTTRAY	J14-6	L: paper peasant.
	bit7	tray 3 paper detection signal	SNDTRAY	J14-9	L: paper peasant.
P010 (output)	bit0	-	TRDTRAY		
	bit1	buffer outlet solenoid drive signal		J4-6	H: ON
	bit2	interrupt trays solenoid drive signal	EXITSL	J4-8	H: ON
	bit3	buffer inlet solenoid drive signal	SBTRYSL	J4-3	H: ON
	bit4	flapper solenoid drive signal	ENTSL	J4-1	H: ON
	bit5	paddle sound drive signal	FLPSL	J11-9	H: ON
	bit6	solenoid timer (full suction) output	PDLSL		
	bit7	escape solenoid drive signal		J11-11	H: ON
P012	bit0	alignment guide home position sensor connector detection	ESCPSL	J9-4	H: connected.
	bit1	stapler tray paper sensor connector detection		J9-3	H: connected.
	bit2	tray lifter motor clock sensor connector detection		J12-10	H: connected.
	bit3	joint sensor connector detection		J12-1	H: connected.
	bit4	stapler drive home position sensor connector detection		J12-4	H: connected.
	bit5	tray home position connector detection		J6-5	H: connected.
	bit6	inlet paper sensor connector detection		J6-8	H: connected.
	bit7	swing guide open sensor connector detection			H: connected.

Address	bit	Display	Signal	Connector	Action
P000A		24-V power (output)			Note
P001A		WW1 bit 1, 2 (input)			See Table 14-806.
P002A		SW1 bit 3, 4 (input)			Table 14-806.
P003A		SW2, 3 (input)			Table 14-806.

Note: When 110 (analog) or higher, the 24 V power supply is normal.

Reading	SW1 bit 1/3; SW2	SW1 bit 2/4; SW3
0 to 72	ON	ON
73 to 104	OFF	ON
105 to 190	ON	OFF
190 to 255	OFF	OFF

Figure 14-806

b. Saddle Finisher

Address	bit	Display	Signal	Connector	Action
P013 (output)	bit0	stitcher motor (rear) CW rotation signal		J8-13/14	L: CW.
	bit1	stitcher motor (rear) CCW signal		J8-11/12	L: CCW.
	bit2	stitcher motor (front) CW rotation		J8-6/7	L: CW.
	bit3	stitcher motor (front) CCW signal		J8-4/5	L: CCW.
	bit4	folder motor CW rotation signal		J4-7	L: CW.
	bit5	folder motor reversal drive signal		J4-8	CW.
	bit6	flapper drive signal 1	FLPSL1	J15-2	L: ON
	bit7	flapper drive signal 2	FLPSL2	J15-4	L: ON
P014 (output)	bit0	-			
	bit1	-			
	bit2	-			
	bit3	-			
	bit4	-			
	bit5	crescent roller contact solenoid drive signal	RLNIPSL	J15-6	H: ON
	bit6	solenoid timer (full suction) output			L: ON
	bit7	paper positioning plate motor power			L: ON
P015 (input)	bit0	24-V power supply down detection		-	H: down.
	bit1	paper pushing plate leading edge detection signal	LUNGETOP	J13-15	H: leading edge.
	bit2	delivery detection signal	DELV	J9-3	L: paper present.
	bit3	-			
	bit4	-			
	bit5	-			
	bit6	-			
	bit7	-			

Address	bit	Display	Signal	Connector	Action
P016 (input)	bit0	-			
	bit1	-			
	bit2	paper pushing plate home position detection signal	LUNGEHP	J9-12	H: HP
	bit3	alignment guide home position detection signal	JOGHP	J11-3	L: HP
	bit4	-			
	bit5	-			
	bit6	-			
	bit7	-			
P017 (input)	bit0	paper positioning plate home position detection signal	PAPPOS	J6-6	L: HP
	bit1	stitcher retraction detection signal	STPLHP	J13-3	L: in.
	bit2	inlet cover open sensor connector detection	INLTCVR	J10-6	L: connected.
	bit3	-			
	bit4	crescent roller phase detection signal	FDRLHP	J9-6	H: flag present.
	bit5	alignment guide home position detection signal	JOGHP	J9-9	L: HP
	bit6	-			
	bit7	-			
P018 (output)	bit0	paper positioning plate motor phase A			
	bit1	paper positioning plate phase B			
	bit2	paper pushing plate motor PWM			
	bit3	feeder motor power			L: ON
	bit4	feeder motor phase A			
	bit5	feeder motor phase B			
	bit6	feeder motor reference clock			
	bit7	paper pushing plate motor CCW rotation (output)		J4-10	L: CCW.
P019 (output)	bit0	alignment motor phase A			
	bit1	alignment motor phase B			
	bit2	folder motor PSWM			
	bit3	paper pushing plate motor CW rotation		J4-9	L: CW.
	bit4	guide plate motor phase A			
	bit5	guide plate motor phase B			
	bit6	guide plate motor power			L: ON
	bit7	alignment motor power			L: ON

Address	bit	Display	Signal	Connector	Action
P020 (input)	bit0	No. 2 paper sensor detection signal	2NDPA	J10-3	L: paper present.
	bit1	No. 3 paper sensor detection signal	3RDPA	J10-4	L: paper present.
	bit2	stitching home position detection signal 2	STCHHP2	J8-10	H: HP
	bit3	stitching home position signal 1	STCHHP1	J8-3	H: HP
	bit4	paper positioning plate detection signal	PPOSPAR	J6-3	L: paper present.
	bit5	tray power detection signal	TRYPAR	J6-9	L: paper present.
	bit6	vertical path paper detection signal	VPJM	J13-6	L: paper present.
	bit7	-			
P021 (input)	bit0	alignment plate home position connector detection		J11-1	H: connected.
	bit1	paper pushing plate home position connector detection		J9-10	H: connected.
	bit2	delivery door open sensor small neck detection signal		J11-7	H: connected.
	bit3	front door open sensor connector detection		J11-10	H: connected.
	bit4	paper pushing plate leading edge sensor connector		J13-13	H: connected.
	bit5	paper holding plate home position sensor connector detection		J9-10	H: connected.
	bit6	-			
	bit7	-			
P022 (output)	bit0	-			
	bit1	LED1 drive			L: ON.
	bit2	-			
	bit3	-			
	bit4	-			
	bit5	-			
	bit6	-			
	bit7	-			
P023 (input)	bit0	staple absent detection signal 2	HKEMP2	J8-8	L: staple absent.
	bit1	staple absent detection single 1	HKEMP1	J8-1	L: staple absent.
	bit2	inlet cover open detecting switch signal	INLTCVRMS	J4-2	H: open.
	bit3	front door open detecting switch signal	FDROPN	J4-4	H: open.
	bit4	delivery door open detection signal	EJCVR	J11-9	L: open.
	bit5	front door open detection signal	FDR	J11-12	L: open.
	bit6	inlet cover open detection signal	INLTCVR	J10-8	L: open.
	bit7	delivery door open detecting switch signal	DELVMS	J4-6	H: open

Address	bit	Display	Signal	Connector	Action
P024 (input)	bit0	DIPSW1 Bit 8			L: ON
	bit1	DIPSW1 Bit 7			L: ON
	bit2	DIPSW1 Bit 6			L: ON
	bit3	DIPSW1 Bit 5			L: ON
	bit4	DIPSW1 Bit 4			L: ON
	bit5	DIPSW1 Bit 3			L: ON
	bit6	DIPSW1 Bit 2			L: ON
	bit7	DIPSW1 Bit 1			L: ON
P025 analog port	bit0	stitcher (rear) staple detected	HKEMP2	J8-8	92 or higher, connected.
	bit1	stitcher (front) staple detection	HKEMP1	J8-1	92 or higher, connected.
	bit2	tray paper detection signal	TRYPAR	J6-9	128 or higher, connected.
	bit3	inlet cover open sensor connector detection	-	J10-6	128 or higher, connected.
	bit4	-			128 or higher, connected.
	bit5	alignment guide home position sensor detection	-	J9-7	128 or higher, connected.
	bit6	-			128 or higher, connected.
	bit7	paper pushing plate leading edge sensor connector detection	-	J13-13	128 or higher, connected.

c. Finisher E1

Address	bit	Display	Signal	Connector	Action
P001	bit0	stack tray home position detection	S10D	J11-15	if '1', home position.
	bit1	inlet paper detection	S2D	J11-18	if '1', paper present
	bit2	stack tray lower limit detection	S12D	J11-3	if '1', lower limit
	bit3	stack tray upper limit detection	S13D	J11-6	if '1', paper present
	bit4	stack tray paper detection	S11D	J12-3	if '1', paper present
	bit5	copier, finisher connection detection	S4D	J11-12	if '1', connection released
	bit6	stack processing tray paper detection	S5D	J9-9	if '1', paper present
	bit7	returning roller home position detection	S3D	J10-6	if '1', home position
P002	bit0				
	bit1				
	bit2				
	bit3				
P003	bit0	front aligning plate home position detection	S6D	J9-3	if '1', home position
	bit1	rear aligning plate home position detection	S7D	J9-6	if '1', home position
	bit2	stack delivery lever home position detection	S8D	J9-12	if '0', home position
	bit3				
	bit4	staple cartridge detection	S18D	J8-13	if '1', cartridge absent
	bit5	staple detection	S15D	J8-7	if '0', staple absent
	bit6	stapling home position detection	S17D	J8-9	if '0', home position
	bit7	staple edge detection	S16D	J8-8	if '1', staple not at edge
P004	bit0	delivery motor clock detection	S1D	J10-3	if '1', rising edge
	bit1				
P005	bit0	stack tray lift motor rotation 1	M5D1	J3-1	if '1', up
	bit1				
	bit2	stack tray lift motor CCW rotation 1	M5D2	J3-2	if '1', down
	bit3				
	bit4	stack tray lift motor clock pulse detection	S9D	J11-9	if '1', rising edge
	bit5	stapler safety detection	S14D	J7-2	if '1', obstacle present

Address	bit	Display	Signal	Connector	Action
P006	bit0				
	bit1				
	bit2	front alignment motor enable signal	-	-	if '1', enabled
	bit3	rear alignment motor enable signal	-	-	if '1', enabled
	bit4				
	bit5				
	bit6	stapler motor rotation 2	M6DA	J8-2	if '0', CW rotation
	bit7	stapler motor CCW rotation 2	M6DB	J8-5	if '0', CCW rotation
P007	bit0	stapler motor rotation 1	M6DA	J8-1	if '0', CW rotation
	bit1	stapler motor CCW rotation 1	M6DB	J8-4	if '0', CCW rotation
	bit2	stack tray lift motor rotation 2	M5D1	J3-1	if '1', up.
	bit3	stack tray lift motor CCW rotation 2	M5D2	J3-2	if '1', down
	bit4				
	bit5				
	bit7	delivery motor OFF signal	-	-	if '0', current ON
P008	bit0	push switch	-	-	if '0', ON
	bit1				
	bit2				
	bit3				
	bit4				
	bit5				
	bit6				
	bit7	24 VP detection	-	-	
P009	bit0				
	bit1				
	bit2				
	bit3				
	bit4				
	bit5				
	bit6				
	bit7				

Address	bit	Display	Signal	Connector	Action
P010	bit0	delivery motor current switching	-	-	1: current low 0: current high
	bit1	stack processing motor current switching 1	-	-	1: current low 0: current high
	bit2	stack processing motor current switching 2	-	-	1: current low 0: current medium
	bit3	front alignment motor current stitching	-	-	1: current low 0: current high
	bit4	rear alignment motor current switching	-	-	1: current low 0: current high
	bit5	LED1	-	-	if '0', ON
	bit6	LED2	-	-	if '0', ON
	bit7	LED3	-	-	if '0', ON
P011	bit0	mode setting switch 0	-	-	if '0', ON
	bit1	mode setting switch 1	-	-	if '0', ON
	bit2	mode setting switch 2	-	-	if '0', ON
	bit3	mode setting switch 3	-	-	if '0', ON
	bit4	mode setting switch 4	-	-	if '0', ON
	bit5	mode setting switch 5	-	-	if '0', ON
	bit6	mode setting switch 6	-	-	if '0', ON
	bit7	mode setting switch 7	-	-	if '0', ON

P012 through P036 are not used.

D. ADJUST Adjustment Mode

Figure 14-813 shows the Level 2 screen and its items.

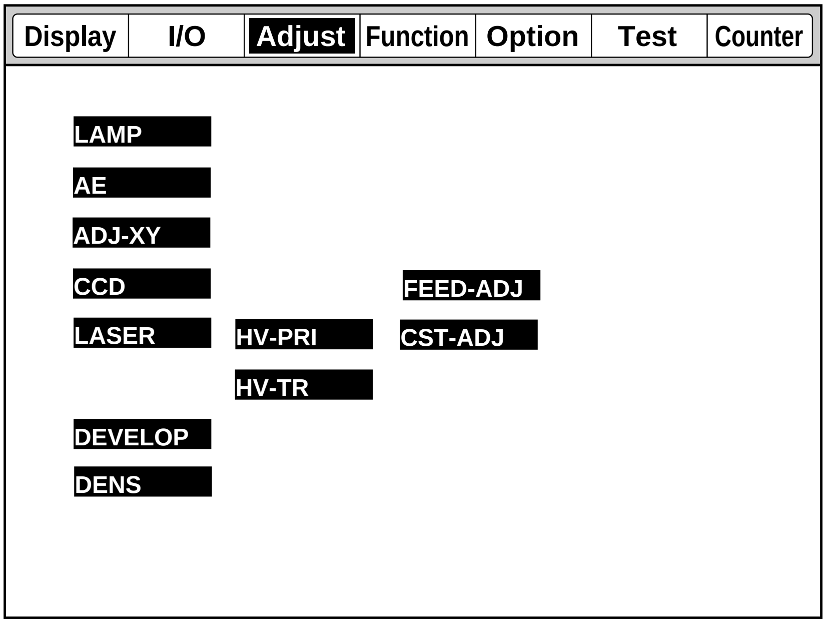

Display
I/O
Adjust
Function
Option
Test
Counter
LAMP
AE
ADJ-XY
CCD
FEED-ADJ
LASER
HV-PRI
CST-ADJ
HV-TR
DEVELOP
DENS

Figure 14-813 ADJSUT Level 2 Screen

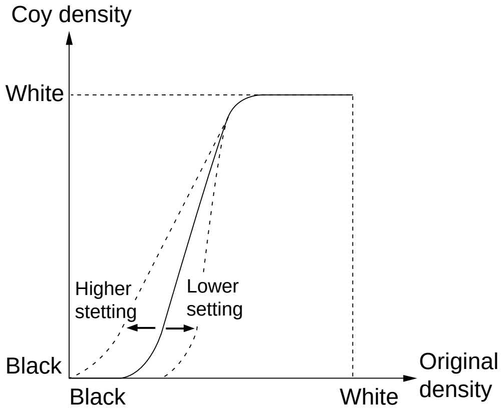
ADJUST Items

Level 1	Level 2	Level 3	Range	Outline
ADJUST	LAMP	FL-OFST	0 to 255	scanning lamp offset
		FL-DUST	0 to 100	lamp post-activation duty ratio adjustment
		FL-PDUTY	0 to 100	lamp pre-activation duty ratio adjustment
	AE	AE-TBL	0 to 9	AE mode text density adjustment
	ADJ-XY	ADJ-X	0 to 1000	image read start position (X direction) adjustment
		ADJ-Y	0 to 400	image read state position (Y direction) adjustment
		ADJ-S	50 to 80	standard white plate read start position fine adjustment
	CCD	PPR	0 to 255	standard white plate density data
		W-PLT	0 to 255	standard white plate data
	LASER	PVE-OFST	-200 to +200	offset from laser center
		LA-OFF	0 to 255	laser trailing edge deactivation adjustment
	DEVELOP	DE-DC	0 to 127	developing DC output during image exposure
		DE-NO-DC	0 to 127	developing DC output during image exposure
		DE-OFST	98 to 158	image bias DC component offset
	DENS	DENS-ADJ	0 to 9	post copy density auto correction fogging adjustment
	HV-PRI	P-DC	0 to 127	image area primary charging DC output
		P-NO-DC	0 to 127	sheet-to-sheet primary charging DC output
		P-AC	0 to 127	primary charging AC output 1 during image exposure
		P-NO-AC	0 to 127	sheet-to-sheet primary charging DC output
		AGS-GAIN	78 to 178	APVC gain
		AGS-OFST	78 to 178	APVC offset
		OFST1-DC	98 to 158	primary charging DC offset
		OFST1-AC	98 to 158	primary charging AC offset 1
		OFST2-AC	98 to 158	primary charging AC offset 2
		P-AC2	0 to 255	primary charging AC output 2 during image exposure
		P-AC3	0 to 255	primary charging AC output 3 during image exposure
	HV-TR	TR-N1	0 to 10	transfer roller bias adjustment (1st side)
		TR-N2	0 to 10	transfer roller bias adjustment (2nd side)
		TR-OFST	98 to 158	transfer charging offset
		TR-SPP	0 to 10	thick paper ATVC table offset adjustment
	FEED-ADJ	REGIST	-320 to +320	registration clutch ON timing
		LOOP-CST	0 to 200	cassette pick-up arching adjustment
		LOOP-MF	0 to 200	multifeeder arching adjustment
		ADJ-REFE	7500 to 8500	re-pick up horizontal registration adjustment
		RVS-FD1	factory setting±100	1-bin reversal point adjustment
		RVS-FD2	factory setting±100	2-/3-bin reversal point adjustment
		RVS-DUP	factory setting±100	duplexing reversal pin adjustment
	CST-ADJ	MF-A4R	0 to 1000	multifeeder paper width sensor adjustment (A4R)
		MF-A6R	0 to 1000	multifeeder paper width sensor adjustment (A6R)
		MF-A4	0 to 1000	multifeeder paper width sensor adjustment (A4)

<LAMP>
Adjusting the Scanning Lamp Reference Activation Voltage

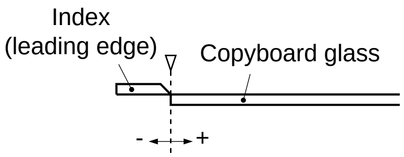
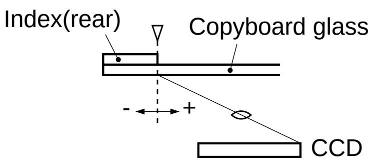
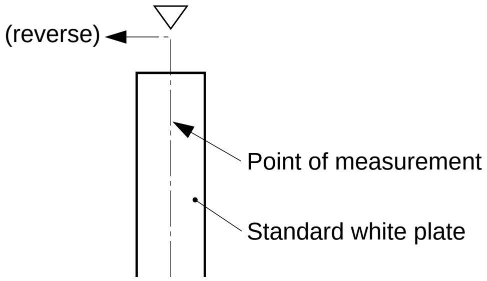
Level 3	Description	Remarks
FL-OFST	Adjusts the scanning lamp offset.	Enter the settings recorded on the service label when replacing the composite power supply PCB.
FL-DUTY	Adjusts the duty ratio used after activation of the scanning lamp.	
FL-PDUTY	Adjusts the duty ratio used before activation of the scanning lamp.	

<AE>
Adjusting for AE Mode

Level 3	Description	Remarks
AE-TBL	Adjusts the text density when AE mode with priority on speed is executed. It adjusts the AE density correction curve for priority on speed AE: A higher setting makes text lighter. A lower setting makes text darker. 	The machine's AE is 'priority on speed' only. Settings: 1 to 9 Default: 3

<ADJ-XY>
Adjusting the Image Read Start Position

ADJUST

Level 3	Description	Remarks
ADJ-X	Adjusts the image read start position (X direction). A higher setting shifts the read start position in the direction of scannerforward movement.  Index (leading edge) Copyboard glass - +	Sub Scanning Direction Unit: about 1 mm for each 12 Range: 0 to 1000
ADJ-Y	Adjusts the CCD read start position (Y direction). A higher setting shifts the read start position toward the front.  Index(rear) Copyboard glass - + CCD	Main Scanning Direction Unit: about 1 mm for each 12 Range: 0 to 400
ADJ-S	Adjusts the position of collecting data for shading correction from the standard white plate.  (reverse) Point of measurement Standard white plate	Unit: 1 mm for each 12 (1 about 0.083 mm) Range: 50 to 80

<CCD>
Adjusting CCD Shading-Related Settings

Level 3	Description	Remarks
PPR	Adjusts the density of the standard white paper. If copies have fogging after executing the following, decrease the setting: 1. Scanner cleaning 2. Shading correction (FUNCTION>CCD>CCD-ADJ) 3. Standard white plate point of measurement (ADJSUT>ADJ-XY>ADJ-S)	Enter the setting recorded on the service label when initializing the RAM or replacing the image processor PCB. Range: 0 to 255
W-PLT	Adjusts the density data of the standard white plate. Do not change the setting in the field.	

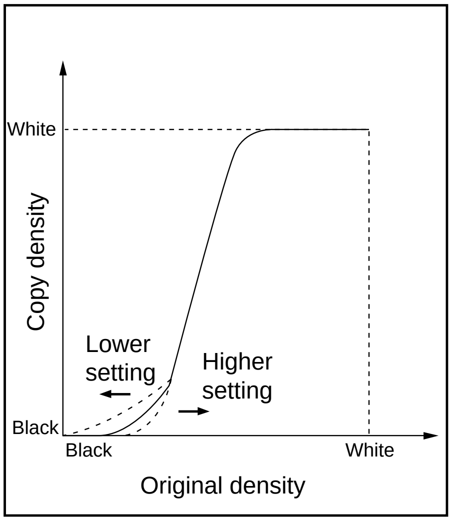
<LASER>
Adjusting the Laser System

Level 3	Description	Remarks
PVE-OFST	Adjusts the offset from the laser center. Adjusts the position of the laser beam. A higher setting shifts the image toward the rear in main scanning direction. A lower setting shifts the image toward the front in main scanning direction.	Range: -200 to +200 1 mm for each 23 Enter the setting recorded on the service label when replacing the composite power supply. To enter a negative value, press the +/- key after entering the value.
LA-OFF	Adjusts the timing at which the laser turns off at the trailing edge of paper (non-default size; free-size paper in the multifeeder; wrong cassette size setting). Adjusts the time from when the trailing edge of paper moves past the pre-registration sensor to when the laser is turned off. This mode is disabled when a default-size paper is picked up. A higher setting increases the time to de-activation. A lower setting decreases the time to de-activation.	Range: 0 to 255

<DEVELOP>
Adjusting the Developing System

Level 3	Description	Remarks
DE-DC	Adjusts the developing bias DC component (0 to 127) for the large area.	Enter the setting indicated on the service label when replacing the composite power supply PCB.
DE-NO-DC	Adjusts the developing bias DC component (0 to 127) applied to the distance between sheets during feeding.	
DE-OSFT	Adjusts the developing bias DC component offset (98 to 158). If the image is too light, decrease the setting. If the image is too dark, increase the setting.	Keep it to factory setting +30, -30

<DENS>
Fine-Adjusting Copy Density Auto Correction

Level 3	Description	Remarks
DENS-ADJ	Adjusts copy density correction if the copy image still has fogging after executing copy density auto correction*. 	Range: 1 to 9 (3*) * Copy density auto correction crefers to the five items under FUNCTION>DENS executed in sequence. See FUNCTION in VIII.

<HV-PRI> ADJUST

Adjustments by Condition for the Primary Charging Roller High-Voltage Output

Level 3	Description	Remar
P-DC	Image area primary charging DC component (0 to 127)	Enter the setting recorded on the service label after replacing the composite power supply PCB.
P-NO-DC	Sheet-to-sheet primary charging DC component during feeding (0 to 127)	
P-AC	Image area primary charging AC component (0 to 255)	
P-NO-AC	Sheet-to-sheet primary charging AC component (0 to 127) during feeding	
AGS-GAIN	APVC gain (78 to 178)	
AGS-OFST	APVC offset (78 to 178)	
OFST1-DC	Primary charging DC offset (98 to 158) If the image is too light, increase the setting. If the image is too dark, decrease the setting.	
OFST1-AC	Primary charging AC offset (98 to 158)	
OFST2-AC	Primary charging AC offset 2 (98 to 158)	
P-AC2	Image area primary charging AC component 2 (0 to 255)	Enter the settings recorded on the service label after replacing the composite power supply PCB.
P-AC3	Image area primary charging AC component 3 (0 to 255)	

<HV-TR>

Adjusting the Transfer Charging Roller High-Voltage Output

Level 3	Description	Remarks
TR-N1	Adjusts the transfer roller bias (0 to 10) for the 1st side of a double-sided print or of a single-sided print on plain paper.	Unit: µA Effective for small-size plain paper; to make it effective for large-size paper, set '1' to OPTION>BODY>TRNS-SW. (if 200 mm or less in main scanning direction, small-size; if over 200 mm, large-size)
TR-N2	Adjusts the transfer roller bias (0 to 10) on the 2nd side of a double-sided print on plain paper.	
TR-OFST	Adjusts the transfer charging offset (98 to 158).	
TR-SPP	Adjusts the offset for thick-paper ATVC* table (0 to 10). Effective for thick paper mode with pick-up from the multifeeder. A higher setting increases the effects.	

ADJUST

<FEED-ADJ>
Adjusting the Feeding System

Level 3	Description	Remarks
REGIST	Adjusting the timing at which the registration clutch turns on (-320 to +320). Adjusts the leading edge margin. A higher setting delays the timing of activation, reducing the leading edge margin.	Unit: mm Standard: Direct 2.5 ±1.0
LOOP-CST	Adjusts the arching (0 to 200) when pick-up is from the cassette.	Enter the settings recorded on the label.
LOOP-MF	Adjusts the arching (0 to 200) when pick-up is from the multifeeder.	
ADJ-FREE	Adjusts the horizontal registration (7500 to 8500). Use it if the image on the paper picked up from the lower feeding assembly is displaced in the main scanning direction. If displaced to the rear, decrease the setting. If displaced to the front, increase the setting.	Unit: 1 mm for each 23 For details, see p. 0-00.
RVS-FD1	Adjusts the point of reversal for bin 1.	Range: factory setting -100, +100
RVS-FD2	Adjusts the point of reversal for bin 2/3.	
RVS-DUP	Adjusts the point of reversal for double-sided sheets.	

<CST-ADJ>
Adjusting the Multifeeder Size

Level 3	Description	Remarks
MF-A4R	Adjusts the paper width basic value for A4R for the multifeeder.	Enter the settings recorded on the service label after replacing the image processor PCB. Execute FUNCTION>CST if the paper width sensor has been replaced or to enter the settings newly.
MF-A6R	Adjusts the paper width basic value for A6R for the multifeeder.	
MF-A4	Adjusts the paper width basic value for A4 for the multifeeder.	

E. FUNCTION Operation Check Mode

Figure 14-814 shows the FUNCTION mode Level 2 screen and its items.

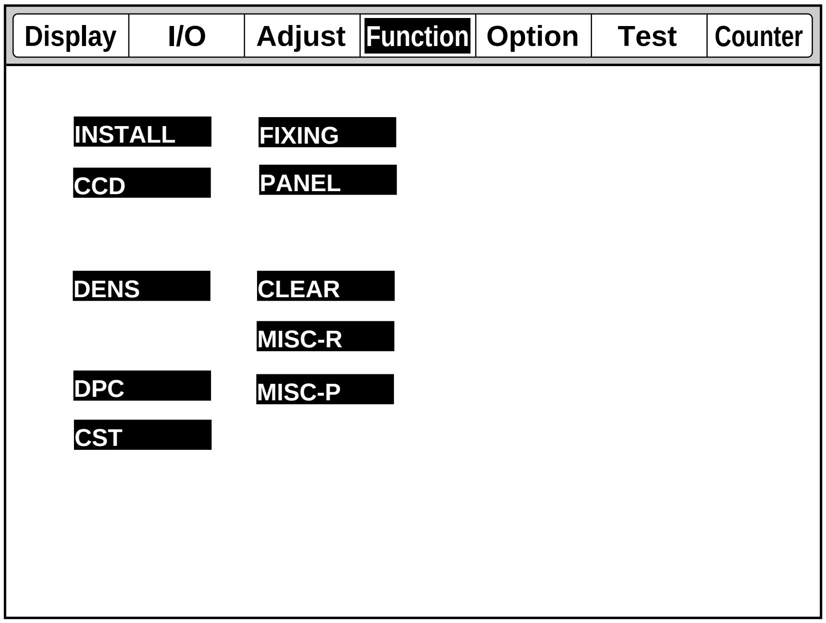

Display
I/O
Adjust
Function
Option
Test
Counter
INSTALL
FIXING
CCD
PANEL
DENS
CLEAR
MISC-R
DPC
MISC-P
CST

Figure 14-814 FUCNTION Level 2 Screen

ADJUST Items

Level 1	Level 2	Level 3	Outline
FUNCTION	INSTALL	TONER-S	toner stirring. (automatically stops in about 4 mm)
	CCD	CCD-ADJ	shading auto correction. (reads the density of the standard white plate)
		MAN-ADJ	shading auto correction (reads the difference between the standard white paper and the white plate)
	DENS	WHITE-ME	standard white paper density read
		PD-DENS	text, text/photo mode image adjustment pattern output
		PD-ME	PD-DENS output read
		DZ-DENS	photo mode image adjustment pattern output (white patches)
		DZ-ME	DZ-DENS output read mode
	DPC	D-GAMMA	photosensitive drum resistance measurement (forced APVC mode)
	CST	MF-A4R	multifeeder paper width basic value storage (A4R)
		MF-A6R	multifeeder paper width basic value storage (A6R)
		MF-A4	multifeeder paper width basic value storage (A4)
	FIXING	NIP-CHK	nip width creation mode
	PANEL	LCD-CHK	LCD dot check
		LED-CHK	control panel LED activation check
		LED-OFF	control panel LED deactivation check
		KEY-CHK	control panel key press check
		TOUCHCHK	analog panel coordinate position adjustment
	CLEAR	ERR	E000 series error initialization
		DC-CON	DC controller PCB RAM initialization
		IP	image processor PCB RAM initialization
		MMI-COPY	copier control panel back-up RAM initialization
		MMI-FAX	fax control panel back-up RAM initialization
		MMI-COM	common setting back-up RAM initialization
		SERVICE	service mode back-up RAM initialization
		FAX	FAX board RAM initialization
		JAM-HIST	jam history initialization
		ERR-HIST	error code history initialization
	MISC-R	SCANLAMP	scanning lamp activation check
	MISC-P	IP-CHK	image processor PCB self diagnosis
		P-PRINT	ADJUST, OPTION, COUNTER storage data generation
		KEY-HIST	copier operation analysis key input report

The upper right corner of the screen indicates the state of the machine. Be sure to pay attention to the indication when executing service mode: the following messages are often indicated:

<READY> The machine is ready to accept a servicing/copying job.
<SERVICE> The copier is executing service mode. This message remains while operations are being checked in service mode.

<INSTALL>
Adjusting the Feeding System

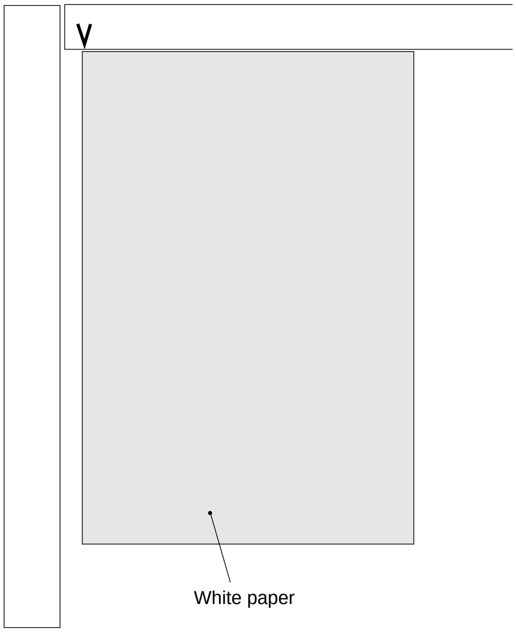
FUNCTION

Level 3	Description	Remarks
TONER-S	Stirs the toner inside the developing assembly at time of installation. **Caution:** • Do not execute this mode without removing the drum cartridge. 1. At Time of Installation Execute this mode without removing the dummy cartridge. However, you may lock only the developing assembly in place and use the door switch actuator; nevertheless, the drum cartridge must not be mounted for this method. 2. After Installation Unlock the feeding assembly and the developing assembly, and remove the drum cartridge; lock the developing assembly, and then execute this mode. ■ Starting the Operation Select TONER-S to highlight; then, press the OK key. ■ During Operation The count (down) will be indicated to the right of <TONER-S>; from 240 to 0 (about 4 min). All keys other than the Stop key remain disabled.	

<CCD>
CCD/Shading-Related Auto Adjustment

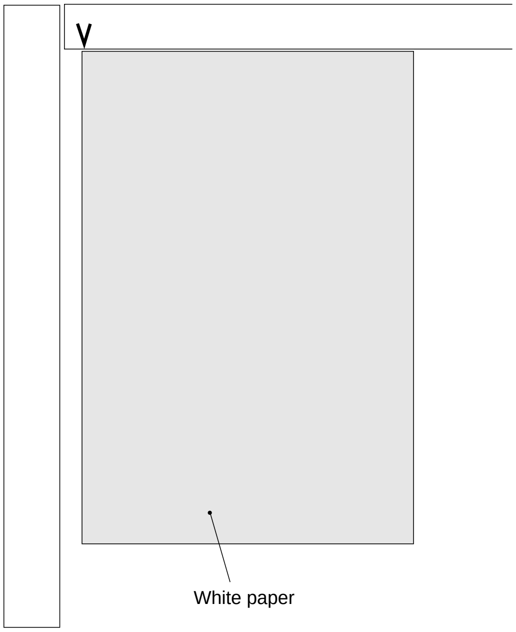
Level 3	Description	Remarks
CCD-ADJ	Executes shading auto correction. Execute this mode after replacing the composite power supply PCB or the laser scanner unit. ■ Operation 1) Select <CCD-ADJ> to highlight. 2) Press the OK key to start (automatic; about 30 sec). During adjustment, the message <SERVICE> will be indicated in the upper right of the screen. 3) During adjustment, the scanning lamp turns on twice; upon completion, END is indicated on the screen.	

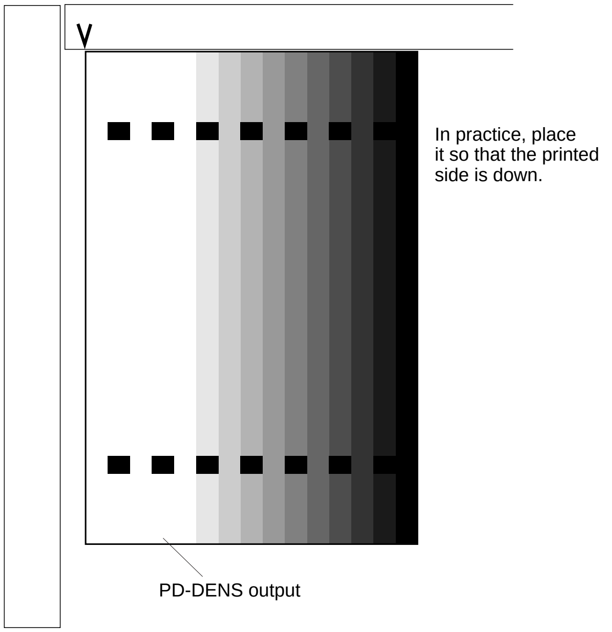
<CCD> FUNCTION

Level 3	Description	Remarks
MAN-ADJ	Executes shading auto correction. Execute this mode after replacing the CCD PCB, scanning lamp, DC controller PB, image processor PCB, or standard white plate. The VR on the DC controller PCB must be turned during execution; be sure to remove the rear cover and locate the VR on the DC controller PCB in advance. During adjustment, SERVICE will be indicated in the upper right corner of the screen. ■ Operation 1) Place five or more sheets of standard white paper on the cupboard glass.  2) Select <MAN-ADJ> to highlight; then, press the OK key. 3) Check that the machine starts auto adjustment mode, and the screen indicates the following: AD -> CLANP -> VOL 4) When a beep is heard while VOL is indicated, press the OK key on the screen. If no beep is heard in several seconds, turn VR200 on the DC controller PCB so that a beep is heard; then, press the OK key. 5) Check that the screen indicates the following after VOL-OK; at the end, it indicates END. GAIN → CLANP2 → DARK → SHADING	

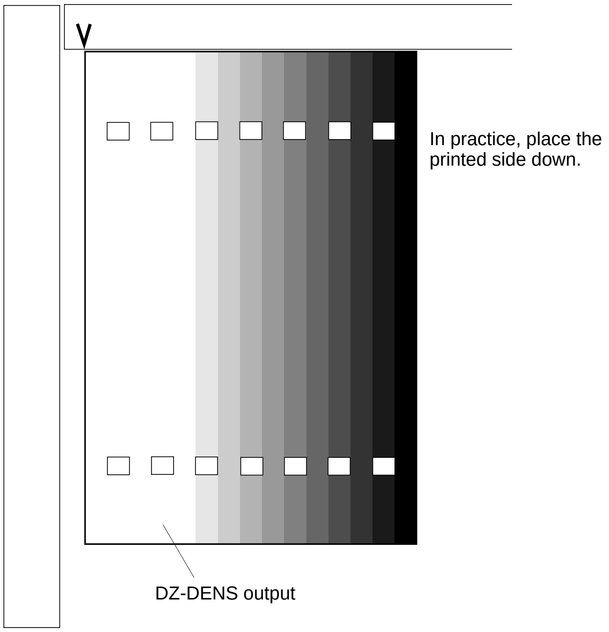
* The whitest of all used by the user (except paper for a color copier).

<DENS>
Density Auto Adjustment
Be sure to execute shading correction before executing density auto adjustment; be sure also to execute WHITE-ME, PD-DENS, PD-ME, DZ-DENS, and DZ-ME in the order indicated.

Level 3	Description	Remarks
WHITE-ME	Executes white level density auto correction. ■ Operation 1) Place about five sheets of white paper (whitest used by the user) on the copyboard, and select WHITE-ME to highlight; then, press the OK key.  2) The scanning lamp makes a single scan, and the operation ends.	
PD-DENS	Generates a print pattern for density auto adjustment in text or text/photo mode. Text and text/photo mode uses binary processing in a PD method, requiring the execution of this mode for density correction. ■ Operation 1) Select <PD-DENS> to highlight, and press the Start key. 2) Check that a 15-gradation print pattern (with black patches) is generated. Keep the pattern for <PD-ME.>	

PD-ME	Executes density auto correction for text or text/photo mode (reads the PD-DENS output). ■ Operation 1) Place the PD-DENS output on the cupboard glass as follows: • Place it so that its printed side faces down. • Place it so that the whiter (lighter) side of the 15 gradations is toward the vertical size plate. • Place it with reference to the V marking in the rear left of the copyboard glass.  V In practice, place it so that the printed side is down. PD-DENS output 2) Select <PD-ME> to highlight; then, press the OK key. The scanning lamp turns on and off 13 times to make scans. • OK is shown to indicate that the execution ended successfully; if NG, perform "If PD-ME/DZ-ME is NG" on p. 14-27.	

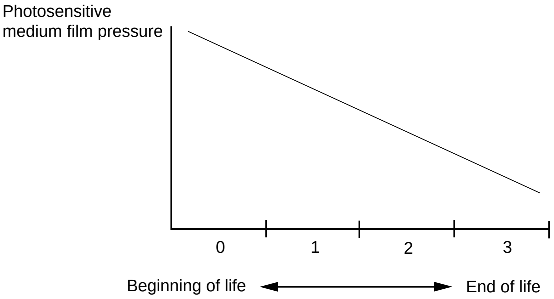
<DENS> FUNCTION

Level 3	Description	Remarks
DZ-DENS	Generates a print pattern for photo mode density auto adjustment. Photo mode uses binary method under a dither method, requiring the execution of density adjustment. ■ Operation 1) Select <DZ-DENS> to highlight, and press the Start key. 2) Check that a 15-gradation print pattern (with white patches) is generated. Keep the pattern for the execution of <DZ-ME>.	
DZ-ME	Executes density auto adjustment for photo mode by reading the DZ-DENS output. 1) Place the DZ-DENS output on the copyboard as follows: • Place it so that its printed side faces down. • Place it so that the whiter lighter side of the 15 gradations is toward the vertical size plate. • Place it with reference to the V marking in the rear left of the copyboard glass.  V In practice, place the printed side down. DZ-DENS output 2) Select <DZ-ME> to highlight; then, press the OK key. The scanning lamp turns on and off 13 times. • OK is indicated to show that the execution ended successfully. • If NG, perform "If PD-ME/DZ-ME is NG" on p. 14-27	

<DPC>

FUNCTION

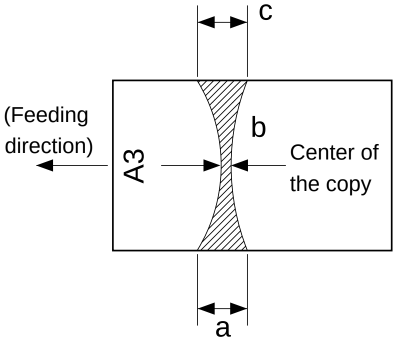
Photosensitive Drum resistance Measurement

Level 3	Description	Ref.
D-GAMMA	Measures the photosensitive drum resistance, and indicates the result in 0 through 3. This mode is effective when '1' is set to OPTION>BODY>AGS-NON. It is a mode in which APVC is forced. ■ Operation 1) Check to make sure that '1' is set to OPTION>BODY>**AGS-NON**. 2) Select **<D-GAMMA>** to highlight, and press the Copy Start key. A solid black copy is generated, and the screen will indicate a number. ■ Uses Use the mode only under the following conditions; do not rely on this mode unnecessarily: • To isolate the cause if copy density auto adjustment ends in NG. • To obtain an idea of the wear of the drum. • To make adjustments if images show faults after replacement of the drum cartridge.  0: The drum is as good as new. 1: The drum will not present a problem. 2: The drum may be replaced. (replace it if possible). 3. The drum must be replaced.	

<CST>
Multifeeder Paper Width Registration

Level 3	Description	Remarks
MF-A4R MF-A6R MF-A4	Restores the multifeeder paper width basic value. For fine adjustment after registration, execute the following: ADJUST>CST-ADJ>**MF-A4R**, **MF-A6R**, **MF-A4**. ■ Operation 1) Place A4R paper in the multifeeder, and adjust the side guide to A4R. 2) Select MF-A4R to highlight, and press the OK key. (The new value will be stored for MF-A4R.) 3) Likewise, repeat steps 1) and 2) for A6R and A4.	A4R width: 210 mm A6R width: 105 mm A4 width: 297 mm

<FIXING>
Fixing Assembly-Related

Level 3	Description	Remarks
NIP-CHK	Fixing Nip Auto Measurement ■ Operation 1) Make an A4 solid black copy; by feeding the output, make a solid black copy. Set the output in the multifeeder. (In other words, feed the same solid black copy through the fixing assembly twice.) 2) Select FIXING>**NIP-CHK**, and press the OK key. 3) Check that the paper is picked up from the multifeeder and is stopped between the fixing rollers; it is then discharged automatically in about 20 sec. 4) Measure the width of the area where the toner is shiny.  c (Feeding direction) A3 b Center of the copy a **Figure 14-227** **Note:** a and c are points 10 mm from both ends.	Standard: b: 5.5 ±0.3 mm | a - c |: 0.5 mm or less See II-E in Chapter 14.

<PANEL>
Control Panel Check

FUNCTION

Level 3	Description	Remarks
LCD-CHK	Checks the LCD for missing dots. ■ Operation 1) Select the item, and press the OK key. The entire face of the LCD turns on in white and blue alternately for several seconds. To stop the operation, press the Stop key.	
LED-CHK	Control Panel LED Check Start ■ Operation 1) Select the item to highlight, and press the OK key. The LEDs are turned on in sequence. To stop the operation, press <**LED-OFF**>.	
LED-OFF	Control Panel LED Check End ■ Operation 1) Select the item to highlight so that <**LED-CHK**> operation will stop.	
KEY-CHK	Key Input Check Start (indicates key number and name) Selecting KEY -CHK once again will end the input check mode.	Table 14-807
TOUCHKEY	Analog Touch Panel Coordinate Position Adjustment Use it to match the point of a press on the analog touch panel and the LCD coordinates. Execute this mode after replacing the LCD. 1) Select the item to highlight, and press the OK key. 2) Press the nine +'s indicated in the upper left of the LCD in sequence. 3) Press the highlighted item once again.	

Input Keys and Numbers/Names

Key	YAKUNUKE	YAKUNUKE	YAKUNUKE	Key	YAKUNUKE
0 to 9, #, *, Reset, Stop	0 to 9, #, *, RESET, STP	Combine	L	Start	START
		User Mode	M	Power Save	STAND BY
				Interrupt	INTERRUPT
				Clear	CLEAR
				ID	ID
				Guide	?
				FAX Speed (1 to 60)	F1 to F60

Table 14-807

<CLEAR> FUNCTION
RAM/Jam History/Error Code Clear

Level 3	Description	Remarks
ERR	Initializes an error. E000, E001, E002, E003, E004, E032, E717 ■ Operation 1) Select the item to highlight, and press the OK key. 2) Turn off and then on the main power supply.	
DC-CON	Initializes the back-up data of the DC controller PCB.	■ Operation • Select the item to highlight, and press the OK key.
IP	Initializes the RAM on the image processor PCB.	
MMI-COPY	Initializes the back-up data of the control panel. (preference mode, mode storage)	
MMI-FAX	Initializes the back-up data of the FAX control panel. (telephone directory, program memory) However, data for one-touch dialing, speed dialing, and caller name is not initialized.	
MMI-COM	Initializes back-up data for common settings. (auto cassette change, manual feed size input)	
SERVICE	Initializes back-up data for service mode.	
FAX	ID mode Initializes data for ID and ID password by group.	
JAM-HIST	Initializes the jam history.	
EER-HIST	Initializes the error code history.	

<MISC-R> FUNCTION
Reader Check

Level 3	Description	Remarks
SCANLAMP	Starts a check on the operation of the scanning lamp. ■ Operation 1) Select the item to highlight, and press the OK key. The scanning lamp will remain on for 1 sec and will then turn off.	

<MISC-P>
Printer Check

Level 3	Description	Remarks
IP-CHK	Executes self diagnosis within the image processor PCB. ■ Operation 1) Select the item to highlight, and press the OK key. A check starts on the PCB, and OK will be indicated if the result is good. If NG is indicated, replace the image processor PCB.	
P-PRINT	Prints the contents of <ADJUST, OPTION and COUNTER> of service mode. Be sure to execute this mode before replacing the image processor PCB. ■ Operation 1) Select the item to highlight, and press the OK key. A total of three pages will be delivered. ■ Source of Paper • If a source is selected on the Basic screen, that source will be used. • If auto paper selection is enabled, the topmost cassette will be used.	The list may be generated in the absence of a FAX board.
KEY-HIST	Generates a key input report for copier operation analysis. Select the item, and press the OK key. AA time at which a key is pressed BB if numeral, the number of soft key HARD: hard key SOFT: soft key ONET: one-touch key CC key type RESET: reset key START: start key GUIDE: guide key USE MDOE: user mode key FNC_COPY: Copy key (extended functions key) FNC_FAX: FAX key (extended functions key) POWER_MMI: control panel power key xxxxxxx function value	

F. OPTION Settings Mode

Figure 14-875 shows the Level 2 screen and its items for OPTION mode.

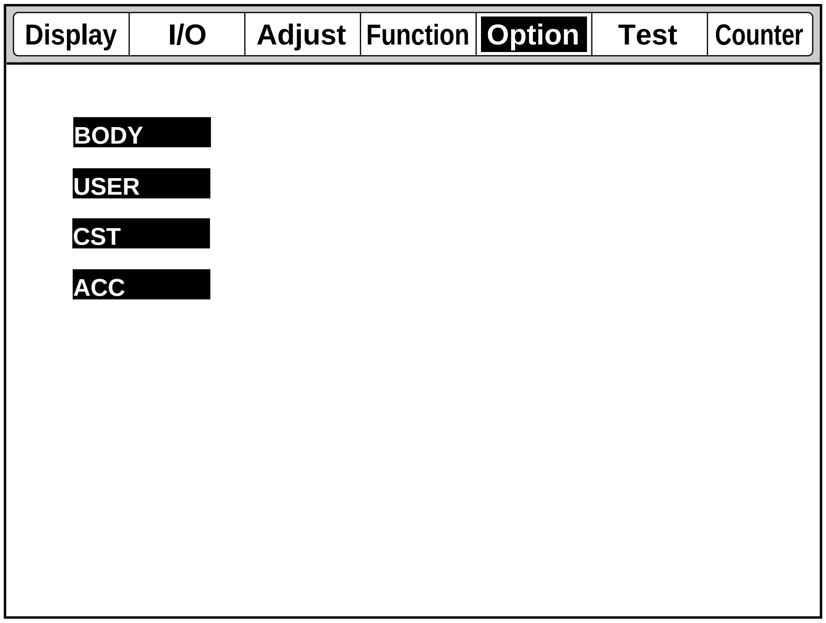

Display
I/O
Adjust
Function
Option
Test
Counter
BODY
USER
CST
ACC

Figure 14-875 OPTION Level 2 Screen

OPTION Items

Level 1	Level 2	Level 3	Outline
OPTION	BODY	AGS-NON	density correction curve selection from photosensitive drum resistance (0*: auto adjust; 1: no change)
		MODEL-SZ	AB/Inch switch (0I: AB; 1: Inch; 2: A; 3: AB/Inch)
		HUM-SW	humidity sensor setting (0*: control by humidity sensor; 1: humidity sensor OFF, for high humidity; 2: humidity sensor OFF, normal humidity; 3: humidity sensor OFF; low humidity)
		TRNS-SW	large-size constant current control switch (0*: constant current control; 1: constant voltage control)
		THINP-SP	thin paper separation mode (0*: OFF; 1: ON)
		GUIDE-SW	fixing assembly inlet guide control mode (0*: no control; 1: 2nd side of double-sided; 2: all)
		PRIAC-SW	image enhancement mode for fault drum charging (0*: OFF; 1: ON)
		ELC-PWR	anti-flicker mode (0*: OFF; 1: ON)
		FAN-SPD	fan drive noise reduction mode (0*: OFF; 1: FM2, FM3 off in STBY; 2: FM2, FM3 off in STBY and FM2, FM3 half-speed in operation)
		IMG-CLR	enable/disable clearing of print images in memory at time of power-on (main power) (0*: do not clear; 1: clear)
		FIX-TYPE	set target control temperature to suit each fixing assembly (0*: 120/230-V model or 100-V system support model; 1: 100-V model)
		TEMPCON2	enhanced fixing mode (0*: normal mode in 100-V area, 1*: normal mode in 120/230-V area, 2: enhanced fixing mode)
	USER	COPY-LIM	copy upper limit change (1 to 999; 999*)
		SLEEP	sleep function ON/OFF (0*: OFF; 1: ON)
		WEB-DISP	fixing cleaning belt warning switch
		FACEDOWN	copy output face-down/face-up switch (0*: top pick-up, face-down; 1: bottom pick-up, face-up)
		FAX-PRT	fax output face (normal, reverse order) (0*: face-down; 1: face-up)
		DATE-DSP	date/time notation switch (0: 'YY/MM/DD; 1: DD/MM/'YY; 2: MM/DD/YY)
		MB-CCV	mail box control card user limit
	CST	U1-NAME	U1 size cassette paper notation ON/OFF
		U2-NAME	U2 size cassette paper notation ON/OFF
		U3-NAME	U3 size cassette paper notation ON/OFF
		U4-NAME	U4 size cassette paper notation ON/OFF
		U5-NAME	U5 size cassette paper notation ON/OFF
		U6-NAME	U6 size cassette paper notation ON/OFF
		U7-NAME	U7 size cassette paper notation ON/OFF
		U8-NAME	U8 size cassette paper notation ON/OFF
		CST-U1	U1 size cassette paper notation set
		CST-U2	U2 size cassette paper notation set
		CST-U3	U3 size cassette paper notation set
		CST-U4	U4 size cassette paper notation set
		CST-U5	U5 size cassette paper notation set
		CST-U6	U6 size cassette paper notation set
		CST-U7	U7 size cassette paper notation set
		CST-U8	U8 size cassette paper notation set
		CST-LTR	LTR size cassette paper notation set
		CST-LTRR	LTRR size cassette paper notation set
	ACC	COIN	coin vendor switch
		DK-P	paper size set for external paper deck.

* Factory setting.

<BODY>
Copier-Related Machine Settings

Level 3	Operation	Remarks
AGS-NON	Enable or disable automatic selection of a density correction curve based on the result of photosensitive drum resistance measurement. The resistance represents the reading of FUNCTION>DPC>**D-GAMMA** when this item is set to '0'. ■ Uses If adjustment is not possible using the Basic Image Adjustment Procedure (i.e., the result is far from the reference value), select '1'. Such a condition, however, indicates that the image processor PCB, DC controller PCB, composite power supply PCB, or scanner unit is faulty.	0*: The density correction curve will automatically be corrected based on the result of measurement. 1: The density correction curve will be maintained as it is (no change).
MODEL-SZ	Switches between B and Inch configuration, and the result will affect the following: • Enlargement/reduction pattern • Feeder size detection However, if '1' is set (FEEDER>OPTION>SIZE-SW), AB/ Inch detection will be made. To change original detection for copyboard cover mode, the size sensors must be rearranged and the DIP SW701 on the image processor PCB must be set accordingly. (VI-H in Chapter 14)	0*:AB 1: Inch 2: A 3: Ab/Inch
HUM-SW	Enables/disables the environment sensor. ■ Uses The machine automatically controls the transfer separation current according to the reading of the environmental sensor. However, this item may be set as needed to suit the site: • To prevent control faults caused by a fault environment sensor. • To enable use in a special environment. • Measurement are taken every 2 hr, and control is based on the average of the most recent five measurements.	0*:control by the environment sensor. 1: fixed mode (for high humidity) 2: fixed mode (for normal humidity) 3: fixed mode (for low humidity) (1, 2, and 3 will not use control by the environment sensor.)
TRNS-SW	Sets the transfer bias output control method for large-size copy paper. Use it to correct image faults on large-size paper owing to transfer. If '1' is set in this mode, the transfer bias control method will be a constant voltage control method for both small- and large-size papers, and TR-N1 and TR-N2 settings will affect transfer output for both small-size and large-size papers.	0*:auto mode 1: manual mode If you have selected manual mode, make sub settings under ADJUST>HV-TR>TR-N1, N2.
THINP-SP	Enables or disables separation enhancement mode. Select '1' to ensure separation of paper with low separation characteristics (thin paper) by increasing the bias used for separation discharge.	0*:OFF (-2.3 KV) 1: ON (- 3.0 KV)

<BODY> OPTION

Level 3	Description	Remarks
GUIDE-SW	Sets control mode for driving the fixing assembly inlet guide. Use it if images are soiled along the trailing edge of paper owing to the fixing assembly. (In such a case, select descent control.)	0*: no control 1: control on 2nd side of double-sided copy 2: control on all
PRIAC-SW	Use it to enable or disable image improvement made by changing the charging current level (as when correcting image faults caused by charging faults of the drum cartridge). It will be effective if the image tends to show white spots in solid areas often occurring between when a new drum cartridge is mounted and about 2000 copies are made. Use it ('1' -> '0') in the following cases: • If a new drum cartridge has been installed and the copier has been turned on. • If COPIER>FUNCTION>D-GAMMA has been executed in service mode. • If the setting has been changed for this item.	0*:do not increase charging current 1: increase charging current
ELC-PWR	Enables or disables a mechanism to prevent flickering of the fluorescent lamp caused by a site environmental factor. Select this item if the fluorescent lamp flickers because of the condition of the site. (effective in 100/120-V areas only)	0*:disable anti-flickering mechanism 1: enable anti-flicker mechanism
FAN-SPD	Selects fan drive sound reduction mode. Use it to reduce the sound of fan drive by decreasing fan rotation speed. This mode is effective only when the site is 27.5°C or less. Do not use it if the site temperature is 27.5°C or more. (applicable to FM2, FM3)	0*:disables fan rotation speed rotation control. 1: in standby, stops 2 delivery heat discharge fans. 2: in addition to '1', rotates 2 delivery heat discharge fans at half speed.
IMG-CLR	Use this mode to enable/disable clearing print images in the memory on the image processor PCB when the main power is turned on. ■ Conditions • The machine must be equipped with an image memory back-up battery. • The printer control software netCraft is used. ■ If the machine is equipped with an image memory back-up battery, the images are backed up even when the main power is turned off. However, some commercially available printer control software is designed to clear the printer log when the main power is turned off, requiring the mode to be set to '1'.	0*:factory setting 1: clear print images at power-on (main power)
FIX-TIPE	Not used. In a 120/230-V model, fixed to '0'. Do not change the setting.	0*:for 120/230-V model. 1: for 100-V model.

Level 3	Description	Remarks
TEMPCOM2	Use this mode to improve fixing if fixing faults occur. Setting this mode to '2' increases the control temperature for fixing regardless of cassette selection to improve fixing. ■ If set to '2', the following will take place: • Increased Control Temperature at standby, 190°C → 195°C during operation, 195°C → 200°C • Increased Initial Multiple Rotation Period 2.5 sec → 20 sec • Increased initial Rotation Start Temperature 100-V model: 170°C → 195°C 120/230-V model: 190°C → 195°C ■ Thick Paper Mode Pick-up starts when the fixing control temperature reaches 195°C. • To select thick paper mode, perform the following: user mode>common settings>special cassette registration>icon selection	0: OFF (factory setting for 100-V model) 1: OFF (factory setting for 120/ 230-V model) 2: ON (enhanced fixing mode for 100/2120/230-V model)

<USER>
User Mode-Related Machine Settings

OPTION

Level 3	Description	Remarks
COPY-LIM	Changes the upper limit for the number of copies. Any number may be set.	1 to 999 (999*)
SLEEP	Enables or disables the sleep function. Use it to enable or disable the shift to sleep state.	0: OFF 1*:ON
WEB-DISP	Enables or disables a warning on the Basic screen when the fixing cleaning belt starts to run out. timing: 145,000th copy (in terms of a4) A warning will be indicated before starting service mode.	0*:disables warning 1: enables warning
FACE-DWN	Switches copy delivery between face-down and face-up. However, delivery will always be face-up if it is independent of sequence; i.e., • single copy • multiple copies without sorting and in copyboard cover mode	0*:face-down (top pick-up for feeder) 1: face-up (bottom pick-up for feeder)
FAX-PRT	Selects a fax output screen.	0*:face-down delivery 1: face-up delivery
DATE-DSP	Switches date/time indication.	0*:'YY MM/DD 1: DD/MM 'YY 2: MM/DD/YY
MB-CCV	Restricts control card users for the mail box.	0*:disables 1: enables

<CST> OPTION

Cassette-Related Settings

To store the new setting, turn off and then on the main power after making the change.

Level 3	Operation	Remarks
U1-NAME	Turns on off the indication of the paper name for the U-size cassette. 0: If the cassette paper size dial is set to U1, the LCD will indicate 'U1'. 1: If the cassette paper size dial is set to U1, the LCD will indicate the abbreviation of the paper selected under <CST-U1>.	
U2-NAME U3-NAME U4-NAME U5-NAME U6-NAME U7-NAME U8-NAME	Turns on and off the indication of the paper name for the U-size cassette. 0: If the cassette paper size dial is set to U2 through U8, the LCD will indicate 'U2' through 'U8'. 1: If the cassette paper size dial is set to U2 through U8, the LCD will indicate the following: U2: FOLIO FOLIO U3: A-FLS FLS U4: G-LTR LTR U5: D-LTRR LTRR U6: G-LGL LGL U7: K-LGL LGL U8: K-LGLR LGLR	
CST-U1	Selects the notation for the U1 size cassette. See Table 14-808. This mode requires an input of a numerical value, not indicating "FLSC" or "OFI" in service mode.	U1: 24, 26, 27, 28, 33, 36
CST-U2 CST-U3 CST-U4 CST-U5 CST-U6 CST-U7 CST-U8	Selects the notation for the U2 through &8, LTR, and LTRR size cassette. However, paper of a default size must be put in the U2 through U8 size cassettes.	U2: 35 U3: 25 U4: 31 U5: 32 U6: 34 U7: 22 U8: 23
CST-LTR	Use it to select notation for the paper in the LTR cassette. Select the nation of the paper to be indicated on the LCD when the paper size registration dial is set to LTR. 18: LTR (factory setting) 29: A-LTRR	Select either 18 or 29. See Table 14-808.
CST-LTRR	Use it to select notation for the paper in the LTRR cassette. Select the nation of the paper to be indicated on the LCD when the paper size registration dial is set to LTRR. 18: LTRR (factory setting) 29: A-LTR	Select either 17 or 30. See Table 14-808.

OPTION

No.	Notation	Paper	No.	Notation	Paper
01	A1	A1	21	LGL	LEGAL
02	A2	A2	22	K-LGL	KOREAN GOVERNMENT
03	A3R	A3R	23	K-LGLR	KOREAN GOVERNMENT R
04	A3	A3	24	FLSC	FOOLSCAP
05	A4R	A4R	25	A-FLS	AUSTRALIAN FOOLSCAP
06	A4	A4	26	OFI	OFICIO
07	A5	A5	27	E-OFI	ECUADORIAN OFFICIO
08	A5R	A5R	28	B-OFI	BOLIVIAN OFFICIO
09	B1	B1	29	A-LTR	ARGENTINE LETTER
10	B2	B2	30	A-LTRR	ARGENTINE LETTER R
11	B3	B3	31	G-LTR	GOVERNMENT LETTER
12	B4R	B4R	32	G-LTR	GOVERNMENT LETTER R
13	B4	B4	33	A-LGL	ARGENTINE LEGAL
14	B5R	B5R	34	G-LGL	GOVERNMENT LEGAL
15	B5	B5	35	FOLI	FOLIO
16	11×17	11'×17'	36	A-OFI	ARGENTINE OFFICIO
17	LTRR	LETTER-R	37		
18	LTR	LETTER	38		
19	STMT	STATEMENT	39		
20	STMTR	STATEMENT-R	40	ALL	

Table 14-808

<ACC>
Accessory-Related

Level 3	Description	Remarks
COIN	Enables or disables coin vendor.	0: OFF 1*:ON
DK-P	Sets the paper size for the side paper deck.	0*:A4 1: B5 2: LTR

G. PG test Print

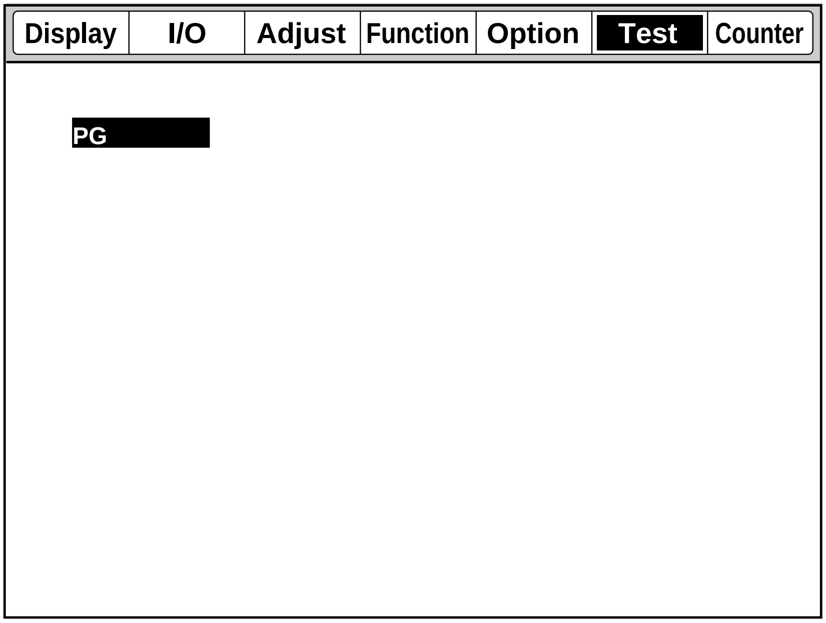

Display
I/O
Adjust
Function
Option
Test
Counter
PG

Figure 14-816

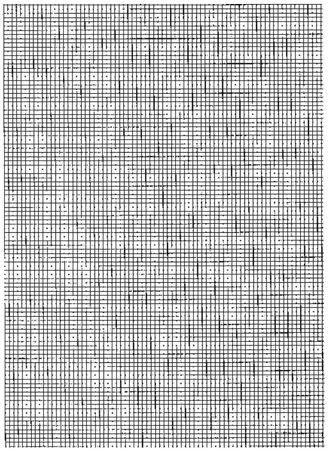
Level 2	Level 3	Outline
PG	TYPE	test print output
	TXPH	test print mode switch

Level 3	Description	Remarks
TYPE	Selects and generates a test print (1 through 8). When the PG screen is closed by resetting, '0' will automatically be set to return to normal copying mode. • Selecting the Source of Paper When a paper type is selected on the Initial screen, paper will be picked up from the selected holder. If auto selection (no source is selected) is enabled, the topmost holder will be used. 0 represents normal copying mode (image from the CCD).	Operation 1) Select 'PG', and enter the number of the item on the keypad. 2) Press the OK key and then the Copy Start key to generate a test print.
TXPH	Selects the output mode for the test print selected by TYPE. Switches between text mode and photo mode. This mode is effective only when making test prints, and the setting will be disabled when the PG screen is closed. 0: text mode 1: photo mode	

1. Grid Test Print

Use it to check the angles (right angles) and lines (straight lines).

- If the lines are not straight,
- suspect a displaced laser beam or a BD fault.

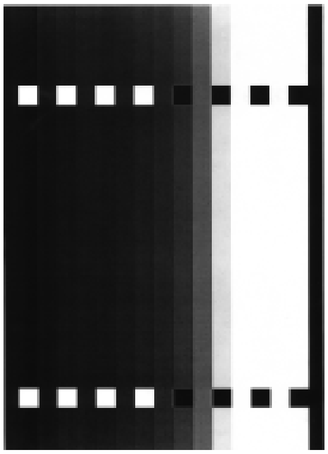


No.1

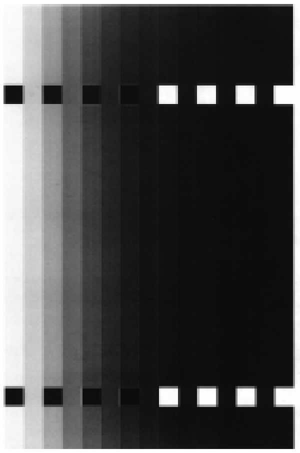
2. 17-Gradation Test Print (with density correction)
3. 17-Gradation Test print (without density correction)

Use it to check gradation, fogging, white lines, and uneven density between left and right.

- If the gradation is poor, suspect a fault in the laser system.
- If fogging is noted, suspect a fault in the photosensitive drum, developing system, or laser.
- If white lines (bands) are noted, suspect a fault in the developing system or dirt on the transfer charging roller.
- If white lines are noted, suspect shading faults caused by dirt on the standard white plate.
- If uneven density between left and right is noted, suspect dirt on the primary charging roller or the developing assembly.

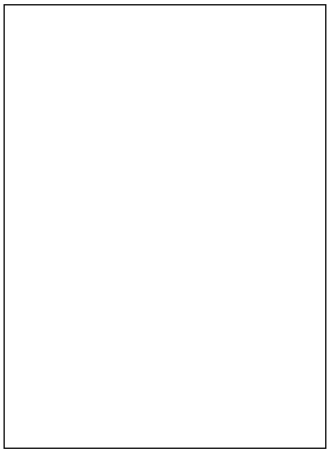


No.2



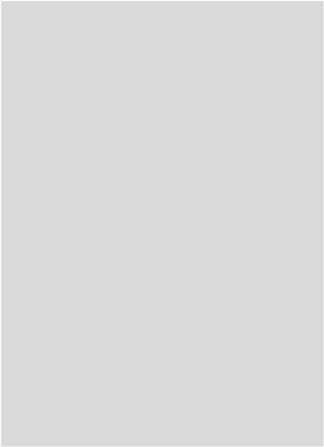
No.3

4. Blank Test Print
   Use it to check for fogging.
   - If fogging is noted, suspect a fault in the photosensitive drum, developing system, or laser.



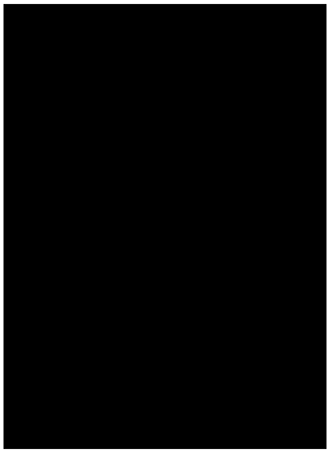
No.4

5. Halftone Test Print
   Use it to check for transfer faults, black lines, white lines, and uneven intervals.
   - If transfer faults (vertical white spots) are noted, suspect dirt on the transfer charging roller or dirt on the separation static eliminator.
   - If black lines re noted, suspect scratches on the drum or dirt on the primary charging roller.



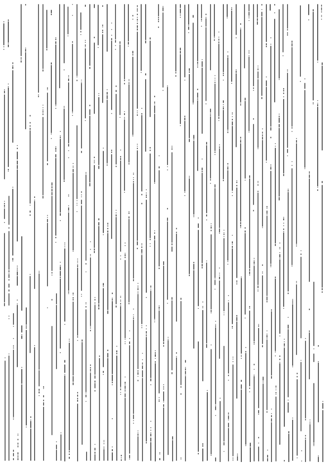
No.5

6. Solid Black Test Print
   Use it to check for white spots and white lines.
   - If white spots are noted, suspect dirt on the transfer charging roller or dirt on the separation static eliminator.
   - If white lines are noted, suspect shading faults caused by dirt on the standard white plate.

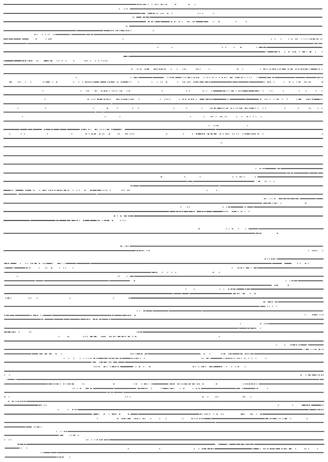


No.6

7. Vertical Straight Line Test Print
8. Horizontal Straight Line Test Print
   Use it to check straight lines.
   - If the lines are not straight, suspect a fault in beam detection.



No.7



No.6

H. COUNTER Mode

Figure 14-817 shows the Level 2 screen and its items for COUNTER mode.

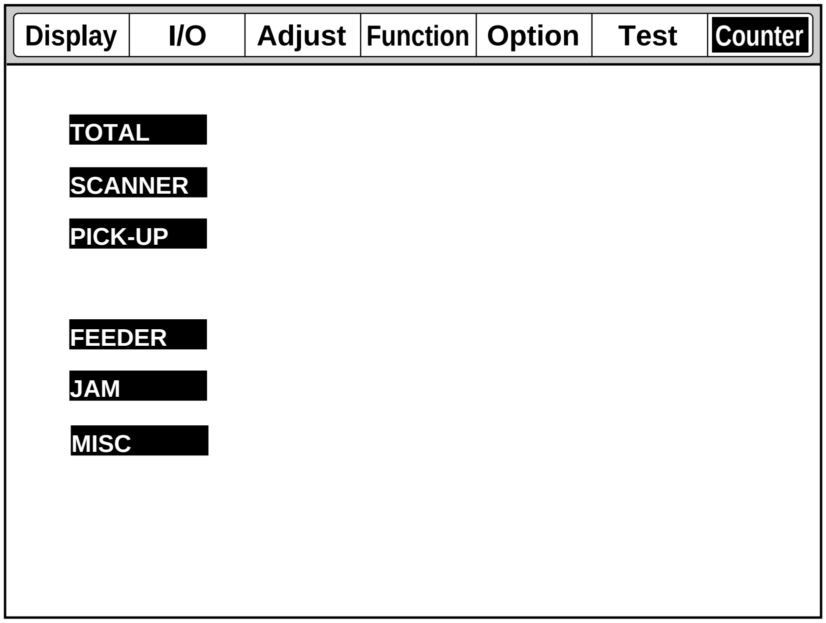

Display
I/O
Adjust
Function
Option
Test
Counter
TOTAL
SCANNER
PICK-UP
FEEDER
JAM
MISC

Figure 14-817

- The reading indicates the number of times the machine has operated.
- To clear the counter reading,
  1) Press the item to highlight.
  2) Press the Clear key on the control panel.

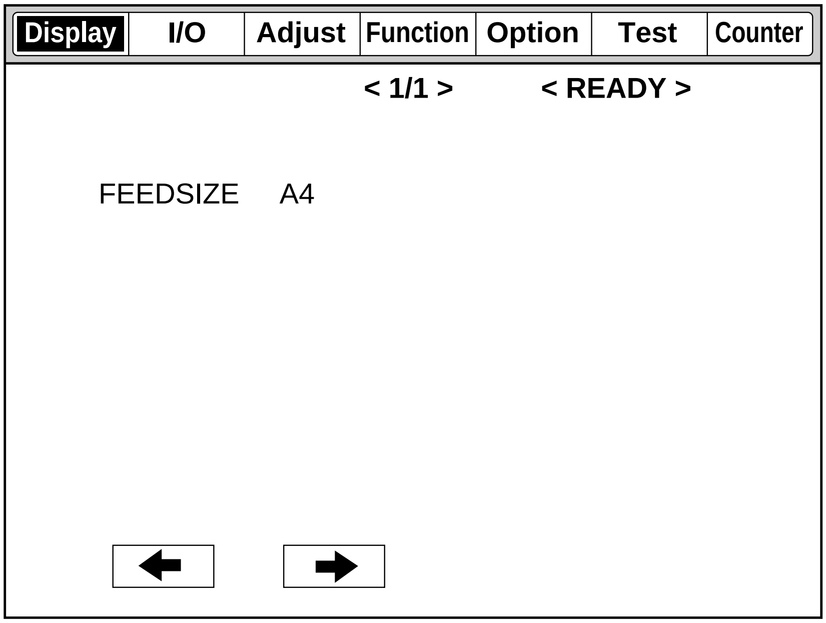
  The counter will be cleared to return to '00000000'.
- In text, the large and small sizes are defined as follows:
  large size: 300 mm long or more or non-default size; e.g., B4 or larger.
  small size: less than 300 mm long; e.g., smaller than A4.

COUNTER Items

Level 1	Level 2	Level 3	Outline
COUNTER	TOTAL	SERVECE1	total copy counter 1 for servicing
		SERVECE2	total copy counter 2 for servicing
		TTL	total copy counter (copier, fax, and all)
		L-TTL	large size copy total counter
		S-TTL	small size total copy counter
		COPY	total copy counter
		L-COPY	large size copy counter
		S-COPY	small-size copy counter
		PRNT	total print counter
		L-PRNT	large-size total print counter
		S-PRNT	small-size total print counter
		FAX	total fax counter
		L-FAX	large-size fax counter
		S-FAX	small-size fax counter
	SCANNER	SC-TTL	scanner total scan counter
		SC-COPY	scan counter for copier mode
		SC-FAX	scanner counter for fax mode
		SC-SCSI	scan counter for SCSI scan
	PICKUP	C1	cassette 1 pick-up total copy counter
		L-C1	large-size cassette 1 pick-up counter
		S-C1	small-size cassette 1 pick-up counter
		C2	cassette 2 pick-up total counter
		L-C2	large-size cassette 2 pick-up counter
		S-C2	small-size cassette 2 pick-up counter
		C3	cassette 3 pick-up total counter
		L-C3	large-size cassette 3 pick-up counter
		S-C3	small-size cassette 3 pick-up counter
		C4	cassette 4 pick-up total counter
		L-C4	large-size cassette 4 pick-up counter
		S-C4	small-size cassette 4 pick-up counter
		C5	cassette 5 pick-up total counter
		L-C5	large size cassette 5 pick-up counter
		S-C5	small-size cassette 5 pick-8p counter
		C6	cassette 6 pick-up total counter
		L-C6	large-size cassette 6 pick-up counter
		S-C6	small-size cassette 6 pick-up counter
		MF	multifeeder pick-up total counter
		L-MF	large-size multifeeder pick-up total counter
		S-MF	small-size multifeeder pick-up total counter
		DK	side paper deck pick-up total counter
		L-DK	large-size side paper deck pick-up total counter
		S-MK	small-size side paper deck pick-up total counter
		2-SIDE	2nd side double-sided pick-up total counter
		L-2-SIDE	large-size 2nd size of double-sided pick-up total counter
		S-2-SIDE	small-size 2nd side of double-sided pick-up total counter

Level 1	Level 2	Level 3	Outline
COUNTER	FEEDER	FEED	feeder pick-up total counter
		L-FEED	large size original feeder pick-up total counter
		S-FEED	small size original feeder pick-up total counter
	JAM	TOTAL	total jam count
		PRINT	print jam count
		FEEDER	feeder original jam count
		SORTER	sorter original jam count
	MISC	FIX-WEB	fixing cleaning belt counter
		FIN-STPL	finisher stapling count 1-point stapling: 1 count; 2-point stapling: 2 counts
		SDL-STPL	saddle finisher stapling count 1-point stapling: 1 count; 2-point stapling count: 2 counts

I. FEEDER



< 1/1 > < READY >

FEEDSIZE A4

Figure 14-818

FEEDER Items

Level 1	Level 2	Outline
DISPLAY	FEEDSIZE	feeder original size display
ADJUST	DOC-ST	top pick-up original stop position adjustment
	DOC-ST-R	bottom pick-up original stop position adjustment
	P-INTL-U	sheet-to-sheet distance for top pick-up adjustment
	P-INTL-L	sheet-to-sheet distance for bottom adjustment
FUNCTION	SENS-INT	DADF sensor auto sensitivity adjustment (initialization)
	UBLT-CLN	DADF top pick-up separation belt cleaning mode
	DBLT-CLN	DADF bottom pick-up separation belt cleaning mode
OPTION	SIZE-SW	AB/Inch size original mix detection ON/OFF
	SCAN-SEL	non-default size original size detection ON/OFF

Note:
In FEEDER, the following are not used: I/O, Test, Counter.

<DISPLAY> FEEDER

Level 1	Description	REf.
FEEDSIZE	Displays the size of original detected by the feeder. e.g., A4, LTR.	

<ADJUST>

Level 3	Description	REf.
DOC-ST	Adjusts the original stop position for top separation. Same as DOC-ST-R.	Unit: 0.5 mm
DOC-ST-R	After selecting the item, place a single original on the RDF original tray, and press the OK key. When the original has been fed, open the feeder, and take note of the original on the copyboard glass. If the original is to the left of the V marking, increase the setting. If the original is to the right of the V marking, decrease the setting.	
P-INTL-U	Selects sheet-to-sheet distance for top pick-up. 1) Check to make sure that '0' is set to COPIER>OPTION>FACE-DOWN. 2) Select the item, and place two originals on the original tray. 3) Press the OK key. The original will be fed and will be stopped on the copyboard glass. 4) Adjust the distance between sheets. If the distance is small, increase the setting. If the distance is large, increase the setting.	
P-INTL-L	Adjusts the sheet-to-sheet distance for bottom pick-up. 1) Check to make sure that '1' is set to COPIER>OPTION>FACE-DOWN. 2) Select the item, and place two originals on the original tray. 3) Press the OK key. The original will be fed and stopped on the copyboard glass. 4) Measure the distance between sheets. If the distance is small, increase the setting. If the distance is large, decrease the setting.	

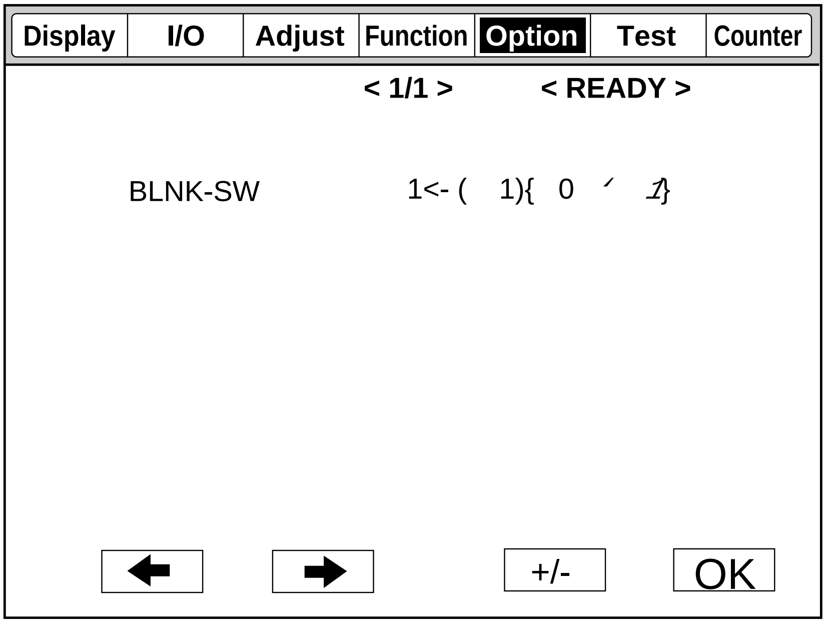
<FUNCTION> FEEDER

Level 3	Description	REf.
SENS-INT	Executes auto sensitivity adjustment for the RDF sensor (initialization). Execute this mode if you replaced the DADF controller PCB, original tray paper sensor (S1), or registration sensor (S3); further, if you have replaced the DADF controller PCB, you will have to perform additional steps. The specifics of this adjustment are the same as those made using the DIP switch on the DADF controller PCB. 1) Remove the DADF controller cover, and find out the location of LED 1/2. 2) Select the item, and press the OK key. 3) Check that the machine executes the mode and stops automatically.	See Standards and Adjustments in the DADF Service Manual.
UBLT-CLN	Executes separation belt cleaning mode for DADF top pick-up. ■ Operation 1) Select UBLT-CLN to highlight. 2) Moisten the center of paper with solvent, and place the paper on the original tray of the feeder. 3) Press the OK key. The original will be fed to the middle, and the top pick-up separation belt will rotate idly. 4) Press the OK key to stop the operation. 5) Open the feeder upper cover, and remove the paper; then, close the upper cover.	
DBLT-CLN	Executes separation belt cleaning mode for DADF bottom pick-up. ■ Operation Same as <UBLT-CLN>.	

<OPTION> FEEDER

Level 3	Description	REf.
SIZE-SW	Enables or disables AB/Inch mix document size detection. 0*:disables detection 1: enable detection	Factory setting: 0
SCAN-SEL	Enables or disables the original size detection for non-default size. 0*:disables detection (normal copying mode) 1: enables detection (priority on paper mode)	Factory setting: 0

J. SORTER (finisher, saddle stitcher)


Display
I/O
Adjust
Function
Option
Test
Counter
< 1/1 >
< READY >
+/-
OK

BLNK-SW 1<- (1){ 0 ´ 1}

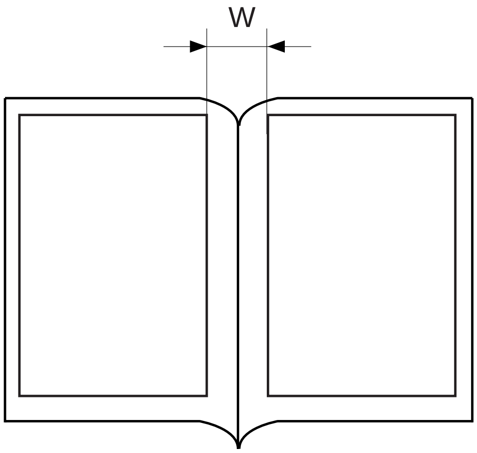
Figure 14-819

SOTER Items

Level 1	Level 3	Outline
OPTION ——	BLNK-SW ——	folding position side margin set for saddle stitcher

Note:
Under SORTR, only the following mode is used: OPTION.

<OPTION>

Level 3	Description	REf.
BLNK-SW	Sets the margin (W) on both sides of the line of folding when the saddle stitcher is used. 0: normal width (5 mm) 1: large width (10 mm) 	

IX. SELF DIAGNOSIS

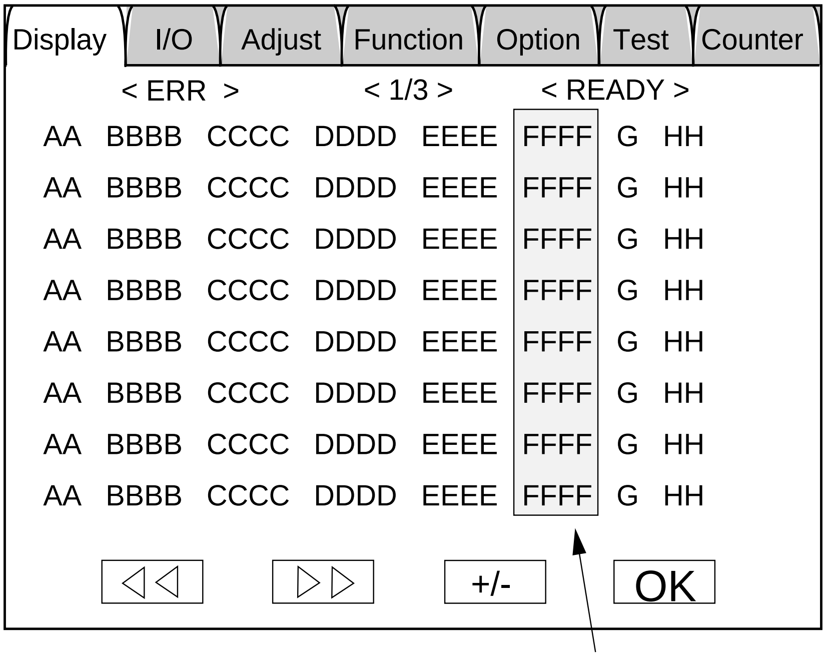
The machine is equipped with a self diagnostic mechanism to check on machine condition (especially sensor condition). It runs a check as needed and, upon detection, indicates the nature of an error on the control panel.

	Error code
Copier	E000,E001,E002,E003,E004,E005,E010,E014,E030, E032,E051,E064,E100,E110,E191,E202,E220,E240, E241,E243,E261,E300,E301,E315, E604,E605,E674 E710,E711,E712,E713,E717,E803,E805
DADF-A1	E400,E401,E402,E403,E404,E411
Cassette Feeding Unit-R1/S1	E716,E901
Multi Output Tray D1	E540
Finisher-C1	E500,E503,E504,E505,E512,E530,E531,E532,E535, E540,E584,
Saddle Finisher-C2	E5F0,E5F1,E5F2,E5F3,E5F4,E5F5,E5F6,E5F8,E5F9
Finisher-E1	E500,E512,E514,E530,E531,E537,E577,E580
Paper Deck-B1	E015,E041,E043
SCSI Interface Board-D1	E501,E603
Printer Board	E677

- Resetting Errors

1. The following error codes cannot be reset by merely turning off and then on the main power. They require resetting in service mode:
   E000, E001, E002, E003, E004, E032, E717
   1) Start service mode, and select COPIER>FUNCTION>CLEAR>ERR.
   2) Press the OK key.
   3) Turn off and then on the main power.
2. Error codes other than the above may be reset by turning off and then on the main power.

- Detail Code
  Some error codes offer detail codes, which may be checked in service mode:
  COPIER>DISPLAY>**ERR** (3rd block from the right)



```
< ERR >          < 1/3 >       < READY >
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
AA  BBBB  CCCC  DDDD  EEEE  FFFF  G  HH
```

Detail codes

Figure 14-901

A. Copier

Code	Detail	Cause	Description
E000		The fixing temperature does not increase. • The main thermistor (TH1) has poor contact or an open circuit. • The fixing heater has an open circuit. • The thermal switch has an open circuit. • The DC controller PCB has a fault. • The image processor PCB has fault.	The main thermistor reading does not reach 55°C 45 sec after the main power switch has been turned on.
E001	0001	The fixing temperature has increased abnormally. • The main thermistor (TH1) has a short circuit. • The fixing heater drive circuit has a fault. • The DC controller PCB has a fault. • The image processor PCB has a fault.	The output of the main thermistor has exceeded 220°C.
	0002	The sub thermistor has detected overheating. • The main thermistor (TH) has a short circuit. • The fixing heater drive circuit has a fault. • The DC controller PCB has a fault. • The image processor PCB has a fault.	The output of the sub thermistor has exceeded 235°C.
	0003	The sub thermistor has an open circuit. • The sub thermistor has an open circuit. • The SSR has a fault. • The DC controller PCB has a fault. • The image processor PCB has a fault.	
E002		The fixing temperature does not reach a specific value. • The thermistor (TH1, TH2) is not mounted properly, has poor contact, or has an open circuit. • The fixing heater has an open circuit or has a crack. • The fixing heater drive circuit has a fault. • The DC controller PCB has a fault. • The image processor PCB has a fault.	The output of the main thermistor satisfies the following: • 31 sec or more between 40°C and 75°C. • 23 sec or more between 75°C and 100°C • 19 sec or more between 100°C and 120°C • 19 sec or more between 120°C and 140°C • 19 sec or more between 140°C and 160°C. • 15 sec or more between 160°C and 170°C.
E003		The fixing temperature has dropped abnormally. • The thermistor (TH1, TH2) is not mounted properly, has poor contact, or has an open circuit. • The fixing heater has an open circuit or has a crack. • The fixing heater drive circuit has a fault. • The DC controller PCB has a fault. • The image processor PCB has a fault.	• The thermistor (TH1, TH2) has detected 100°C or less after wait-up.

Code	Detail	Cause	Description
E004	0001	The SSR has a short circuit. • The SSR has an error. • The DC controller PCB has a fault.	• The fixing heater remains on. • The fixing temperature has increased abnormally.
	0002	The heater relay has an error. • The heater relay has an error. • The DC controller PCB has a fault.	The heater relay remains on.
E005		The fixing cleaning belt has been taken up. • The fixing cleaning belt has been taken up. • The DC controller PCB has a fault. • The image processor PCB has a fault.	The fixing cleaning belt drive solenoid has been driven more than a specific number of times.
E010		The main motor has faulty rotation. • The main motor (M1) has a fault. • The DC controller PCB has a fault. • The image processor PCB has a fault.	• The rotation of the main motor does not stabilize 9 sec after it has started. • While the main motor is rotating at a constant speed, its revolution has deviated from a specific value by 9 sec or more.
E014		The fixing motor has faulty rotation. • The main motor (M2) has a fault. • The DC controller PCB has a fault. • The image processor PCB has a fault.	• The rotation of the main motor does not stabilize 1 sec after it has started. • While the fixing motor is rotating at a constant speed, its revolution has deviated from a specific value by 1 sec or more.
E030		The total copy counter does not operate. • The total copy counter (CNT1) has an open circuit. • The DC controller PCB has a fault. • The image processor PCB has a fault.	• A check is made immediately before the counter turns on and off. (When the counter turns on, normal if the counter drive signal is '0'.)
E032		The copy controller counter has an error. • The counter data communication between the copier and the copy data controller has an error. • The DC controller PCB has a fault. • The image processor PCB has a fault.	The copy data controller does not detect count data within a specific time after the copier has sent the copy start signal.
E051		The horizontal registration home position detection mechanism has a fault. • The horizontal registration sensor (PS10) has a fault. • The horizontal registration motor (M9) has a fault. • The DC controller PCB has a fault.	The home position cannot be detected after the horizontal registration signal has been sent.

Code	Detail	Cause	Description
E064		The high-voltage (primary charging, transfer charging, development) output has a fault. • The composite power supply PCB has a fault. • The DC controller PCB has a fault. • The wiring has a fault (short circuit, open circuit).	• The difference between the output prescribed by the high-voltage control signal and the high-voltage output actually generated is more than a specific value. • Either the primary charging roller, transfer charging roller, or developing bias has an output error.
E100	0001	BD error has occurred. • The laser unit has a fault. • The BD PCB has a fault. • The BD PCB has a fault. • The laser driver PCB has a fault.	• The BD signal is not generated during image formation (2nd sheet pick-up and later). • The BD signal cycle has deviated.
	0002		• The BD signal is not generated within 2 sec after the laser has turned on (at time of 1st sheet pick-up).
E110		The laser scanner motor does not generate clock pulses. • The laser scanner motor (M3) has a fault. • The laser scanner driver PCB has a fault. • The DC controller PCB has a fault.	• The laser scanner motor does not reach a specific speed after the laser scanner motor drive signal has been generated. • The laser scanner motor deviates from a specific speed after it has reached it.
E191		The serial communication between the DC controller PCB and the composite power supply PCB has a fault.	• The communication data is not updated for 8 sec or more. • The check sum of the communication data varies three times continuously.
E202 • No code indication. • Control panel keys locked.		The scanner home position cannot be detected. • The scanner home position sensor (PS1) has a fault. • The scanner motor (M3) has a fault. • The DC controller PCB has a fault.	• The scanner does not reach the home position after it has started to operate.
E220		The scanning lamp turns on abnormally. • The scanning lamp has a fault. • The intensity sensor has a fault. • The CCD PCB has a fault. • The composite power supply PCB has a fault. • The DC controller PCB has a fault.	• The lamp intensity does not exceed a specific value within a specific time after scanning operation starts (following lamp activation). • The lamp remains off for 10 sec when it should remain on.
E240		The communication on the image processor PCB has a fault. • The communication between the DC-CPU and the IP-CPU has an error.	A communication error is detected between the DC-CPU and the IP-CPU on the image processor CPB.

Code	Detail	Cause	Description
E243		The communication with the control panel has an error. • The control panel CPU has an error. • The image processor PCB has an error.	A communication error is detected between the CPU on the control panel and the image processor PCB.
E261		The zero-cross signal has an error. • The power supply frequency fluctuates. • The composite power supply PCB has a fault.	The intervals of the zero-cross signal deviates from a specific range.
E300	0000	The download data contains a mismatch model type (speed, spec).	The download data is found to be for a different model when the main switch is turned on after downloading.
	0001	The versions of the two flash ROMs on the image processor PCB do not match.	
E301		The scanning lamp intensity has a fault. • The scanning lamp has a fault. • The CCD PCB has a fault. • The DC controller PCB has a fault.	The output of the intensity sensor drops below a specific value while the lamp is on.
E315		The image data coding mechanism has an error. • The coding chip has an error. • The image memory has an error.	A fault is discovered when image data is coded/decoded.
	0001	An error has occurred in self diagnosis on the chip for image compression/ decompression.	When the main power is turned on.
	0002	An error has occurred in decoding.	When image data is being decoded for printing.
	0003	An error has occurred in coding.	When image data is being coded during copying or fax reading.
	0004	An error has occurred in coding.	When image data is being coded during storing print data.
E603		The SCSI fuse has blown.	The SCSI fuse has blown.
E604		The image memory has a fault. • The RAM has a fault. • The expansion memory is not mounted properly.	A write fault is detected when image data is written to the image memory.
E605		The image memory battery has a fault. • The battery has a fault. (The image memory battery is an accessory to the FAX board.)	The voltage of the image memory battery is lower than a specific value (if after an adequate charging time and the power was turned on within a charge life).
E674		The fax unit has a fault. • The chip has a fault. • The fax unit has poor connection.	An error is detected when writing to the chip while receiving a fax message.

Code	Detail	Cause	Description
E677		The communication between the printer board and the copier is faulty.	An error has occurred in the communication between the printer board and the IP-CPU.
	0001	An error is noted while the printer board is being started up.	The power-on signal from the printer board does not reach the image processor PCB.
	0002	The communication between the printer board and the copier is faulty.	An error has occurred in the communication between the printer board and the IP-CPU.
	0003	The initialization of the printer board is faulty.	
	0004	The communication between printer board and the copier is faulty.	
	0005	A check-sum error is noted at the end of initializing the printer board.	
	0006	Time-out error during processing of PDL data	
E710		The IPC chip self diagnosis has an error. An error exists in the IPC chip self diagnosis mechanism on the image processor PCB.	The IPC chip self diagnosis mechanism on the image processor PCB does not end normally when power is turned on.
E711		The IPC communication has a fault. • The cable has poor contact. • The cable has a fault. • The options print PCB unit has a fault. • The accessory IPC chip has a fault.	The communication between the IPC chip on the image processor PCB and the IPC chip (accessory) has a fault.
E712		The communication with the feeder has a fault.	The communication is interrupted.
E713		The sorter IC has an error.	The communication is interrupted.
E716		The communication with the pedestal has a fault.	The communication is interrupted.
E717		The communication with the copy data controller has a fault.	The communication is interrupted.

* Displas the error history only.
For 0006 of E677, the printer board will be reset, thereby canceling the job.

Code	Detail	Cause	Description
E803		Both ends of the fluorescent lamp became black because of an error output voltage of the composite power supply or deterioration of the lamp.	The output voltage of the composite power supply PCB (+24 VU, +24 VR) has an error. For details, refer to LED200 (to see how it turns on; p.14-133).
E805		The fan rotation has a fault. • The fan has a fault. • The DC controller PCB has a fault. • The fan connector has poor contact.	• The fan motor does not rotate at a specific speed 5 sec after it has started to rotate. • The fan motor rotation deviates from a specific value for 5 sec or more while it is rotating at a specific speed. For the locations of the fans, see II. of Chapter 10.
	0002	Fixing heat discharge fan 1 (FM2)	
	0003	Fixing heat discharge fan 2 (FM3)	
	0004	Laser driver cooling fan (FM4)	
	0005	Laser scanner motor cooling fan (FM5)	
	0006	Laser scanner motor cooling fan 2 (FM6)	
	0007	Cleaner heat exhaust fan (FM7)	
	0008	System cooling fan (FM8)	
	0010	Low-voltage power supply cooling fan 1 (FM10)	
	0011	Low-voltage power supply cooling fan 2 (FM11)	
	0012	Reader cooling fan 1 (FM12)	
	0013	Reader cooling fan 2 (FM13)	
	0014	Drum cartridge cooling fan 1	
	0015	Drum cartridge cooling fan 2	
	0016	Drum cartridge cooling fan 3	
	0017	DC controller PCB cooling fan	
	0018	Scanner motor cooling fan	

B. DADF

Code	Cause	Description
E400	• The data communication with the copier has a fault.	• The communication is monitored at all times, and this error is identified when the communication is interrupted for 5 sec or more.
E401	• The pick-up motor (M1) does not rotate. • The pick-up roller sensor (S5) has a fault.	• A flag is attached to the shaft of the pick-up motor (M1), and the rotation of the motor is detected when the flag blocks the pick-up roller sensor (S5). This error is identified when the sensor does not turn on and off twice or more within 1 sec.
E402	• The belt motor (M3) does not rotate. • The belt motor clock sensor (S10) has a fault.	• The number of belt motor clock pulses within 200 msec is below a specific value.
E403	• The feeder motor (M2) does not rotate. • The feeder motor clock sensor (S9) has a fault.	• The number of feeder motor clock pulses within 200 msec is below a specific value.
E404	• The feeder motor (M5) does not rotate. • The feeder motor clock sensor (S13) has a fault.	The number of feeder motor clock pulses within 200 msec is below a specific value.
E411	• The original tray paper sensor (S1) has a fault. • The registration sensor (S3) has a fault.	The output for the sensor is 2.3 V or more in the absence of paper.

Caution:

1. If the self diagnosis mechanism has turned on, turn on and off the copier's power switch.
2. If the DADF is out of order, open it and place an original on the copyboard glass to make copies.

C. Cassette Feeding Unit-R1/S1

Code	Cause	Description
E716	The pedestal has an error. • The pedestal controller PBC has an error. • The connector has poor connection. • The 24-V power supply has a fault.	The communication IC (Q101) on the pedestal controller PCB is out of order.
E901	• The pedestal motor (M20) has a fault. • The pedestal controller PCB has a fault.	• The pedestal motor does not rotate at a specific speed within 10 sec after it has turned on. • The pedestal motor speed deviates

D. Multi Output Tray-D1

Code	Cause	Description
E540	The shift tray home position sensor fails.	The home position detection signal does not turn on within 5 sec when making a shift tray home position search.

E. Finisher-C1

Code	Detail code	Error	Description
E500	-	• Data communication error	• The communication between the copier and the finisher is interrupted. This error is detected by the copier.;
E503	0003	• Communication error	• The communication with the saddle stitcher is interrupted.
E504	0001	• Height sensor (PS1)	• The communication between the height sensor and the finisher controller is not possible. Or, the communication data has an error.
	0002		• The communication between the sensor and the finisher controller PCB is not possible for a specific period or more.
	0003		• The disconnection of the sensor connector is detected at time of power-on.
	0004		• The sensor adjustment made by a DIP switch has an error.
E505	0001	• Back-Up RAM	• The check sum has an error at power-on.
E512	0001	• Delivery motor (M2) • Delivery motor clock sensor (PI10)	• The number of clock pulses was not obtained from the delivery motor clock sensor at the start of operation.
	0002		• The clock pulses stop for an equivalent of 200 mm during feeding operation.
E530	0001	• Alignment motor (M3) • Alignment plate home position sensor (PI6) • The fixing heater drive circuit has a fault.	• The alignment plate does not leave the alignment home position sensor after the alignment motor has been driven for 2 sec.
	0002		• The alignment plate does not return to the alignment plate home position sensor after the alignment motor has been driven for 2 sec.

Code	Detail code	Error	Description
E531	0001	• Stapler motor (M6) • Stapler motor home position sensor (PI7)	• The stapler does not leave the stapling home position even when the stapler motor has been driven for 0.5 sec.
	0002		• The stapler does not leave the home position even when the stapler motor has been driven for 0.5 sec.
E532	0001	• Stapler shift motor (M4) • Stapler shift home position sensor (PI7)	• The stapler does not leave the stapler shift home position even when the stapler shift motor has been driven for 4 sec.
	0002		• The stapler shift home position cannot be detected even when the stapler motor has been driven for 4 sec.
E535	0001	• Delivery motor (M2) • Swing guide closed detecting switch 2 (MS6)	• The swing guide closed detecting switch does not turn on even when the delivery motor has been driven in reverse direction for 1 sec.
	0002	• Delivery motor (M2)	• The swing guide open sensor does not turn on when the delivery motor has been turned counterclockwise for 1 sec.
	0003	• Safety area switch (MS3) • Swing guide closed detecting switch (MS6)	• The swing guide closed detecting switch turned off when the tray 1/2 is in the safety switch OFF position.

Code	Detail code	Error	Description
E540	0001	• Tray lifter motor (M5) • Tray lifter motor clock sensor 1/2 (PI19, PI9) • Tray home position sensor (PI8)	• The upward movement does not end within 15 sec when the tray lifter motor has been driven. • The tray home position is not detected even when the tray lifter motor has been driven for 15 sec.
	0002	• Tray upper limit detecting switch (MS4)	• The tray upper limit detecting switch turned on while the tray is moving upward.
	0003	• Tray lifter motor (M5) • Tray lifter motor clock sensor 1/2 (PI19/PI20)	• The clock sensor 1/2 does not generate clock pulses for 200 msec or more even when the tray lifter motor has been driven.
E584	0001	• Feeder motor (M1) • Shutter closed sensor (PI5)	• The shutter closed detecting switch does not turn on even when the feeder motor has been driven in reverse for 1 sec or more.
	0002	• Feeder motor (M1) • Shutter closed sensor (PI5)	• The shutter open sensor does not turn on even when the feeder motor has been driven in reverse for 1 sec or more.
	0003	• Safety area detecting switch (MS3) • Shutter closed detecting switch (MS4)	• The shutter detecting switch turned off when the tray 1/2 is in the safety area switch OFF position.

F. Saddle Finisher-C2

Code	Detail code	Error	Description
E5F0	0001	• Paper positioning plate motor (M4S) • Paper positioning plate home position sensor (PI7S)	• The paper positioning plate home position sensor does not turn on even when the paper positioning plate motor has been driven for 1.25 sec or more.
	0002		• The paper positioning sensor does not turn off even when the paper positioning plate motor has been driven for 1 sec or more.

Code	Detail code	Error	Description
E5F1	0001	• Folding motor (M2S) • Folding motor clock sensor (PI4S)	• The number of detecting pulses of the folding motor clock sensor has dropped below a specific value.
E5F2	0001	• Guide motor (M3S) • Guide home positioning sensor (PI13S)	• The guide home positioning sensor does not turn on even when the guide motor has been driven for 0.4 sec or more.
	0002		• The guide home position sensor does not turn off even when the guide motor has been driven for 1 sec or more.
E5F3	0001	• Alignment motor (MSS) • Alignment plate home position sensor (PI5S)	• The alignment plate home position sensor does not turn on even when the alignment motor has been driven for 0.5 sec or more.
	0002		• The alignment plate home position sensor does not turn off even when the alignment motor has been driven for 1 sec or more.
E5F4	0001	• Stitcher motor (rear, M6S) • Stitching home position switch (rear, PS2S)	• The stitching home position switch does not turn off even when the stitcher motor (rear) has been rotated clockwise for 0.5 sec or more.
	0002		• The stitching home position switch does not turn on even when the stitcher motor (rear) has been driven in reverse for 0.5 sec or more during jam recovery.
E5F5	0001	• Stitcher motor (front, M7S) • Stitching home position switch (front, PS4S)	• The stitching home position switch does not turn off even when the stitcher motor (front) has been driven clockwise for 0.5 sec or more.
	0002		• The stitching home position switch does not turn on even when the stitcher motor (front) has been driven in reverse for 0.5 sec or more.

Code	Detail code	Error	Description
E5F6	0001	• Paper pushing plate motor (M8S) • Paper pushing plate home position sensor (PI14S)	• During a shift to the paper pushing plate home position, the paper pushing plate home position sensor does not turn on even when the paper pushing plate motor has been driven for 1.0 sec or more.
	0002		• During a shift to the paper pushing plate leading edge position, the paper pushing plate home position sensor does not turn on when the paper pushing plate motor has been driven for 1.0 sec or more.
	0003	• paper pushing plate motor (M8S) • Paper pushing plate leading edge sensor (PI15S)	• During a shift from the paper position plate leading edge position to home position, the paper pushing plate leading edge position sensor does not turn off even when the paper pushing plate motor has been driven for 1.0 sec or more.
	0004	• Paper pushing plate motor (M8S) • Paper pushing plate motor clock sensor (PI1S)	• The number of detecting pulses of the paper pushing plate motor clock sensor drops below a specific value.
E5F8	0001	• Connector of the guide home position sensor (PI13S)	• The connector of the guide home position sensor is identified as being disconnected.
	0002	• Connector of the pushing plate home position sensor (PI14S)	• The connector of the paper pushing plate home position sensor is identified as being disconnected.
	0003	• Connector of the pushing pate leading edge position sensor (PI15S)	• The connector of the paper pushing plate leading edge sensor is detected to be disconnected.

Code	Detail code	Error	Description
E5F9	0001	• Inlet door open detecting switch (MS1S) • Inlet door sensor (PI9S)	• The inlet door open detecting switch is detected to be open for 1 sec or more from the start of copying or from the start of the copier's initial multiple rotation while the following three cover photointerrupers detect that the doors are open: • Inlet door sensor (PI9S) • Front door open sensor (PI2S) • Delivery door open sensor (PI3S)
	0002	• Front door open detecting switch (MS2S) • Front door open sensor (PS2S)	• The front door open detecting switch detects that the front door is open for 1 sec or more from the start of copying or from the start of the copier's initial multiple rotation while the following three cover photointerrupers detect that the doors are closed: • Inlet door sensor (PI9S) • Front door open sensor (PI2S) • Delivery door open sensor (PI3S)
	0003	• Delivery door open detecting switch (MS3S) • Delivery door open sensor (PI3S)	• The delivery door open detecting switch detects that the delivery door is open for 1 sec or more form the start of copying or from the start of the copier's initial multiple rotation while the following three cover photointerrupers detect that the doors are open: • Inlet door sensor (PI9S) • Front door open sensor (PI2S) • Delivery door open sensor (PI3S)

G. Finisher-E1

Code	Cause	Description
E500	• The copier connection harness is faulty (disconnection, open circuit). • The finisher controller PCB or the copier's DC controller PCB is faulty.	The communication between the copier and the finisher has been interrupted for 5 sec or more.
E512	• The delivery motor (M1) is faulty. • The delivery clock sensor (S1) is faulty; or, the connector is disconnected, or there is an open circuit. • The finisher controller PCB is faulty.	The delivery clock sensor (S1) signals are not detected when the delivery motor (M1) has been driven for a specific period of time or more (equivalent of 70 mm, 80 pulses).
E514	• The stack processing motor (M2) is faulty. • The stack delivery lever home position sensor (S8) is faulty; or, the connector is disconnected, or there is an open circuit. • The stack processing motor (M2) relay harness is faulty. • The stack delivery belt is faulty. • The returning roller is faulty.	The stack delivery lever does not reach the stack lever home position sensor (S8) when the stack processing motor (M2) has been driven for a specific period of time at the start of operation. **Reference:** The same condition detected during delivery of a stack will be treated as a jam.
E530	• The rear alignment motor (M4) is faulty. • The rear aligning plate home position sensor (S7) is faulty. • The rear alignment motor relay harness is faulty. • The rear aligning plate has a faulty load.	• The aligning plate does not reach the home position sensor (S7) when the rear alignment motor (M4) has been driven for a specific period of time. • The rear aligning plate does not leave the home position when the rear alignment motor (M4) has been driven for a specific period of time.
E531	• The staple motor (M6) is faulty. • The stapling home position sensor (S17) is faulty. • The stapler harness is faulty. • The finisher controller PCB is faulty.	• The stapler does not leave the stapling home position sensor (S17) within 0.5 sec after the stapler motor has been rotated clockwise. • The stapler does not return to the stapling home position sensor (S17) within 0.5 sec after the stapler motor has been driven clockwise; then, it does not return to the sensor within 0.5 sec when the motor has been rotated clockwise thereafter.

Code	Cause	Description
E537	• The front alignment motor (M3) is faulty. • The front aligning plate home positions sensor (S6) is faulty. • The front alignment motor relay harness is faulty. • The front aligning plate has an excess load.	• The aligning plate does not reach the aligning plate home position sensor when the front alignment motor (M3) has been driven for a specific period of time. • The aligning plate doe not leave the aligning plate home position sensor (S6) after the front alignment motor (M3) has been driven for a specific period of time.
E577	• The stack processing motor (M2) or the finisher controller PCB is faulty. • The returning roller home positions sensor (S3) is faulty; or, the harness connector is disconnected, or there is an open circuit. • The stack processing motor relay harness is faulty. • The stack delivery lever is faulty. • The returning roller is faulty.	The returning roller does not reach the home position even when the stack processing motor (M2) has been driven long enough to return it to the returning roller home positions sensor (S3). **Reference:** The same condition will be treated as a jam if it occurs while the stack is being aligned in feeding direction.
E580	• The stack tray lift motor (M5) is faulty. • The stack tray power height sensor (S10) is faulty; or, the harness connector is disconnected, or there is an open circuit. • The stack tray lift motor has a faulty load. • The finisher controller PCB is faulty.	• The stack tray upper limit sensor (S13) has turned on while the tack tray lift motor (M5) is being driven. • The clock signal from the stack tray lift motor clock sensor (S9) is not detected 15 times or more within 0.8 sec while the stack tray lift motor (M5) is being driven. • The stack tray does not reach the stack tray paper height sensor (S10) 4 sec after the stack tray lift motor (M5) has been turned on for upward movement. • The stack tray does not leave the stack tray paper height sensor (S10) 4 sec after the stack tray lift motor (M5) has been turned on for downward movement.

H. Paper Deck-B1

Code	Cause	Description
E041	• The deck lifter motor (M102) has a fault. • The side deck driver PCB has a fault. • The DC controller has a fault. • The deck lifter position sensor (PS104) has a fault. • The deck paper supply position sensor (PS107) has a fault.	• The deck lifter position sensor (PS104) does not detect the lifter within 60 sec after the deck lifter up signal has been generated. • The deck paper supply position sensor (PS107) is '0' when the deck lifter position sensor (PS104) and the deck level sensor position (PS108) are '1'.
E043	• The deck main motor (M101) has a fault. • The side deck driver PCB has a fault. • The DC controller has a fault.	• The deck main motor PLL lock signal (DMPLK) is '1' for 900 msec or more after the deck main motor drive signal has been generated.

I. SCSI Interface Board-D1

Code	Detail	Cause	Description
E601		The communication between the SCSI board and the copier has an error.	The communication between the SCSI-CPU and the IP-CPU has been interrupted.
	0000		If the response from the SCSI board has an error when the machine sends a command to the SCSI board.
	0001		When an initial check is made for communication.
	0002		When an initial check is made for communication.
	0003		When a check is made for communication initialization.
	0004		When a check is made for communication initialization.
	0005		When a check is made for communication initialization.
	0006		If no response comes from the SCSI board within a specific time when the machine sends a command to the SCSI board.
	0007		If no response comes from the machine to the SCSI board within a specific time.
	0008		If the machine has sent NAK three times or more in response to a command from ACSI board.
	0010		If the SCSI board has sent NAK three times or more when it sends a command to the machine.
E603		The fuse of the SCSI has blown.	The fuse of the SCSI has blown because of overcurrent.

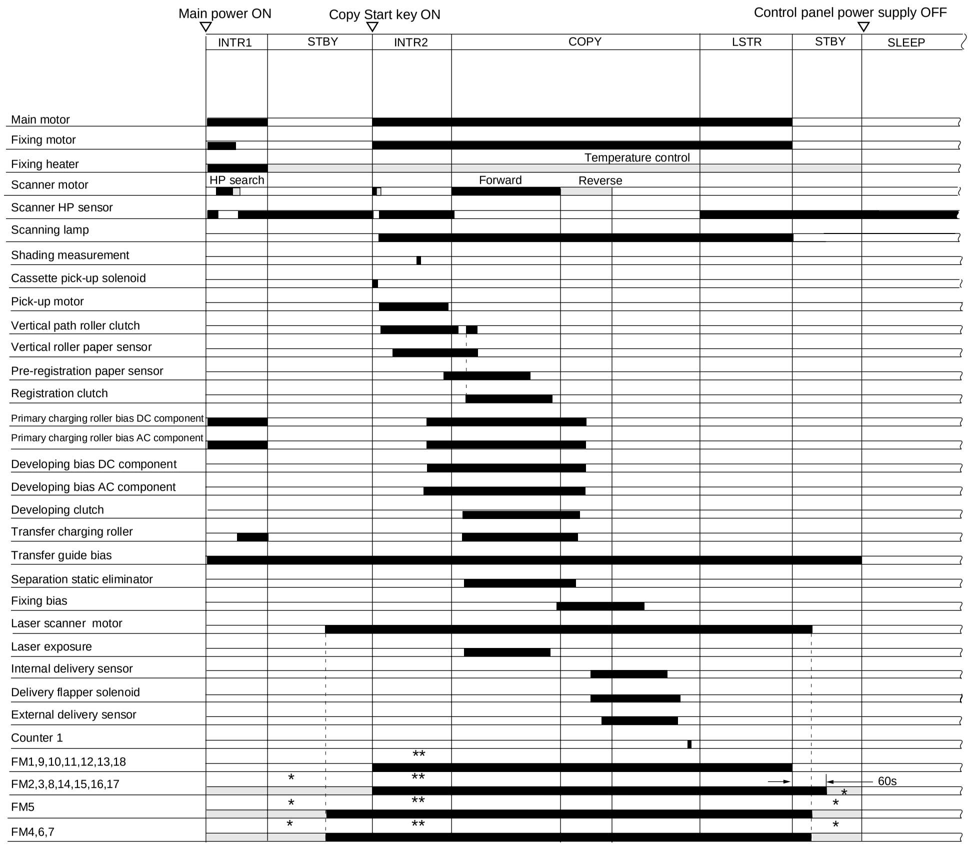
APPENDIX

A. GENERAL TIMING CHART A-1
B. SIGNAL NAME/ABBREVIATION LIST A-3
C. GENERAL CIRCUIT DIAGRAM ... A-7
D. SIDE PAPER DECK GENERAL CIRCUIT DIAGRAM A-13
E. SPECIAL TOOLS A-15
F. SOLVENTS AND OILS A-17

A. GENERAL TIMING CHART

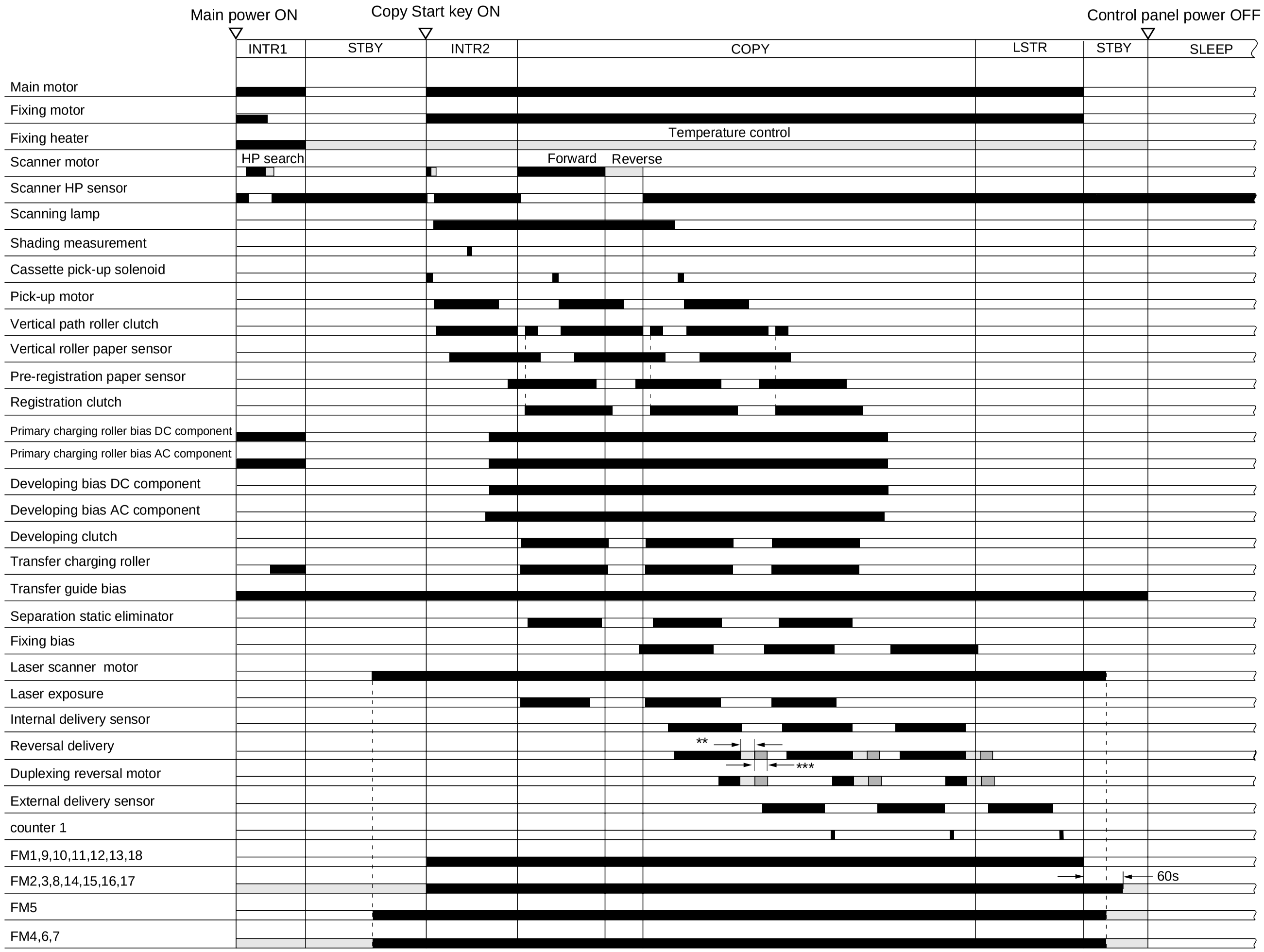
Basic Sequence of Operations (direct Copying)

- A4, plain paper, Direct, copyboard cover, 1 copy, topmost cassette, face-up delivery



*Half speed rotation. **Full-speed rotation.

- pick-up from feeder, 1 original, plain paper, A4, 3 copies, Direct, cassette 1, memory copying



**Double speed rotation. ***Reversal double speed rotation.

B. SIGNAL NAME/ABBREVIATION LIST

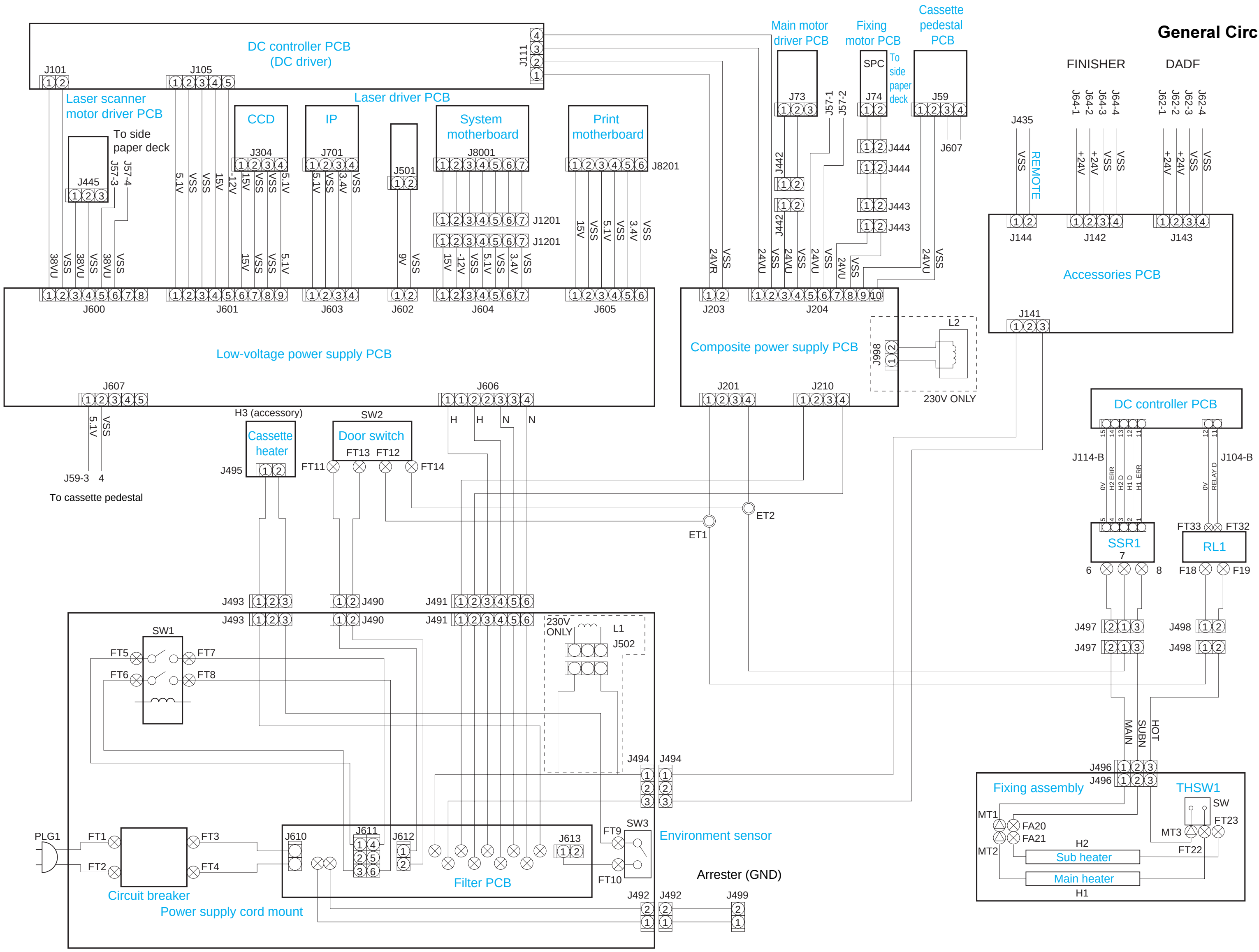
1RPD0	CASSETTE 1 PAPER DETECTION 0 signal
1RPD1	CASSETTE 1 PAPER DETECTION 1 signal
2RPD0	CASSETTE 2 PAPER DETECTION 0 signal
2RPD1	CASSETTE 2 PAPER DETECTION 1 signal
ASSCNTP	COPY DATA CONTROLLER COUNTER PULSE signal
ASSRXD	COPY DATA CONTROLLER RECEPTION DATA signal
ASSTXD	COPY DATA CONTROLLER TRANSMISSION DATA signal
CL1D	REGIST CLUTCH DRIVE signal
CL2D	MULTIFEEDER CLUTCH DRIVE command
CL3D	VERTICAL PATH ROLLER CLUTCH DRIVE command
CL4D	DEVELOPING CLUTCH DRIVE command
CN1D	COUNTER DRIVE 1 command
CN2D	COUNTER DRIVE 2 command
CN3D	COUNTER DRIVE 3 command
CS1B0	CASSETTE 1 SIZE DETECTION signal 0
CS1B1	CASSETTE 1 SIZE DETECTION signal 1
CS1B2	CASSETTE 1 SIZE DETECTION signal 2
CS1B3	CASSETTE 1 SIZE DETECTION signal 3
CS1B4	CASSETTE 1 SIZE DETECTION signal 4
CS2B0	CASSETTE 2 SIZE DETECTION signal 0
CS2B1	CASSETTE 2 SIZE DETECTION signal 1
CS2B2	CASSETTE 2 SIZE DETECTION signal 2
CS2B3	CASSETTE 2 SIZE DETECTION signal 3
CS2B4	CASSETTE 2 SIZE DETECTION signal 4
DRUMTEMP	DRUM TEMPERATURE DETECTION signal
FDOOR_PD	FRONT DOOR OPEN DETECTION signal
FLS_S	FLUORESCENT LAMP INTENSITY signal
FM1D	FAN1 (FM1) DRIVE command
FM2D	FAN2 (FM2) DRIVE command
FM2LK	FAN2 (FM2) LOCK signal
FM3D	FAN3 (FM3) DRIVE command
FM3LK	FAN3 (FM3) LOCK signal
FM4D	FAN4 (FM4) DRIVE command
FM4LK	FAN4 (FM4) LOCK signal
FM5D	FAN5 (FM5) DRIVE command
FM5LK	FAN5 (FM5) LOCK signal
FM6D	FAN6 (FM6) DRIVE command
FM6LK	FAN6 (FM6) LOCK signal
FM7D	FAN7 (FM7) DRIVE comand
FM7LK	FAN7 (FM7) LOCK signal
FM8D	FAN8 (FM8) DRIVE comand
FM8LK	FAN8 (FM8) LOCK signal
FM9D	FAN9 (FM9) DRIVE comand
FM10D	FAN10 (FM10) DRIVE command
FM10LK	FAN10 (FM10) LOCK signal

FM11D	FAN11 (FM11) DRIVE command
FM11LK	FAN11 (FM11) LOCK signal
FM12D	FAN12 (FM12) DRIVE command
FM12LK	FAN12 (FM12) LOCK signal
FM13D	FAN13 (FM13) DRIVE command
FM13LK	FAN13 (FM13) LOCK signal
FM14D	FAN14 (FM14) DRIVE command
FM14LK	FAN14 (FM14) LOCK signal
FM15D	FAN15 (FM15) DRIVE command
FM15LK	FAN15 (FM15) LOCK signal
FM16D	FAN16 (FM16) DRIVE command
FM16LK	FAN16 (FM16) LOCK signal
FM17D	FAN17 (FM17) DRIVE command
FM17LK	FAN17 (FM17) LOCK signal
FM18D	FAN18 (FM12) DRIVE command
FM18LK	FAN18 (FM12) LOCK signal
HUMT	ENVIRONMENT SENSOR TEMPERATURE signal
HUMID	ENVIRONMENT SENSOR HUMIDITY signal
HVPON	SEPARATION STATIC ELININATOR ON command
LWPD	LOWER CASSETTE PAPER DETECTION signal
M1D	MAIN MOTOR DRIVE command
M1LCK	MAIN MOTOR LOCK signal
M4D	LASER SCANNER MOTOR DRIVE command
M4LK	LASER SCANNER MOTOR LOCK signal
MTVR	MULTIFEEDER PAPER WIDTH signal
PED	PRE-CONDITIONING EXPOSURE LAMP LIT signal
PFLPH	FLUORESCENT LAMP PRE THEMISTOR signal
PFLPWM	FLUORESCENT LAMP PWM DRIVE signal
PS1S	SCANNER HOME POSITION signal
PS2S	COPYBOARD COVER CLOSE signal
PS3S	MULTIFEEDER PAPER DETECTION signal
PS4S	REGISTRATION PAPER DETECTION signal
PS6S	INSIDE DELIVERY PAPER DETECTION signal
PS7S	EXTERNAL DELIVERY PAPER DETECTION signal
PS8S	PAPER DETECTION 8 signal
PS9S	PAPER DETECTION 9 signal
PS10S	SIDE REGISTRATION PAPER DETECTION signal
PS11S	VERTICAL PATH PAPER DETECTION signal
PS12S	RIGHT DOOR OPEN DETECTION signal
PS13S	LEFT DOOR OPEN DETECTION signal
PS14S	WASTE TONER DETECTION signal
PS18S	PAPER DETECTION 18 signal
PS19S	PAPER DETECTION 19 signal
	FEED PAPER ROLLER DOWN
SL1D	SOLENOID DRIVE signal

SL2D	DELIVERY DEFLCTION SOLENOID DRIVE signal
SL3D	MULTI FEED ROLLER SOLENID DRIVE signal
SL4D	PRIMALY CHARGING ROLLER CLEANING SOLENOID DRIVE signal
SL5D	FIXING CLEANING BELT DRIVE SOLENOID DRIVE signal
SL6PLL	FIXING ASSEMBLY GUIDE DOWN SOLENOID DRIVE signal
SL6BACK	FIXING ASSEMBLY GUIDE UP SOLENOID DRIVE signal
TH1_S	MAIN THEMISTOR DRIVE command
TH2_X	SUB THEMISTOR
TH2_Y	SUB THEMISTOR
TS1S	TONER ENPTY signal
UPPD	UPPER CASSETTE PAPER DETECTION signal
VPPD	CASSETTE VERTICAL PATH PAPER DETECTION signal

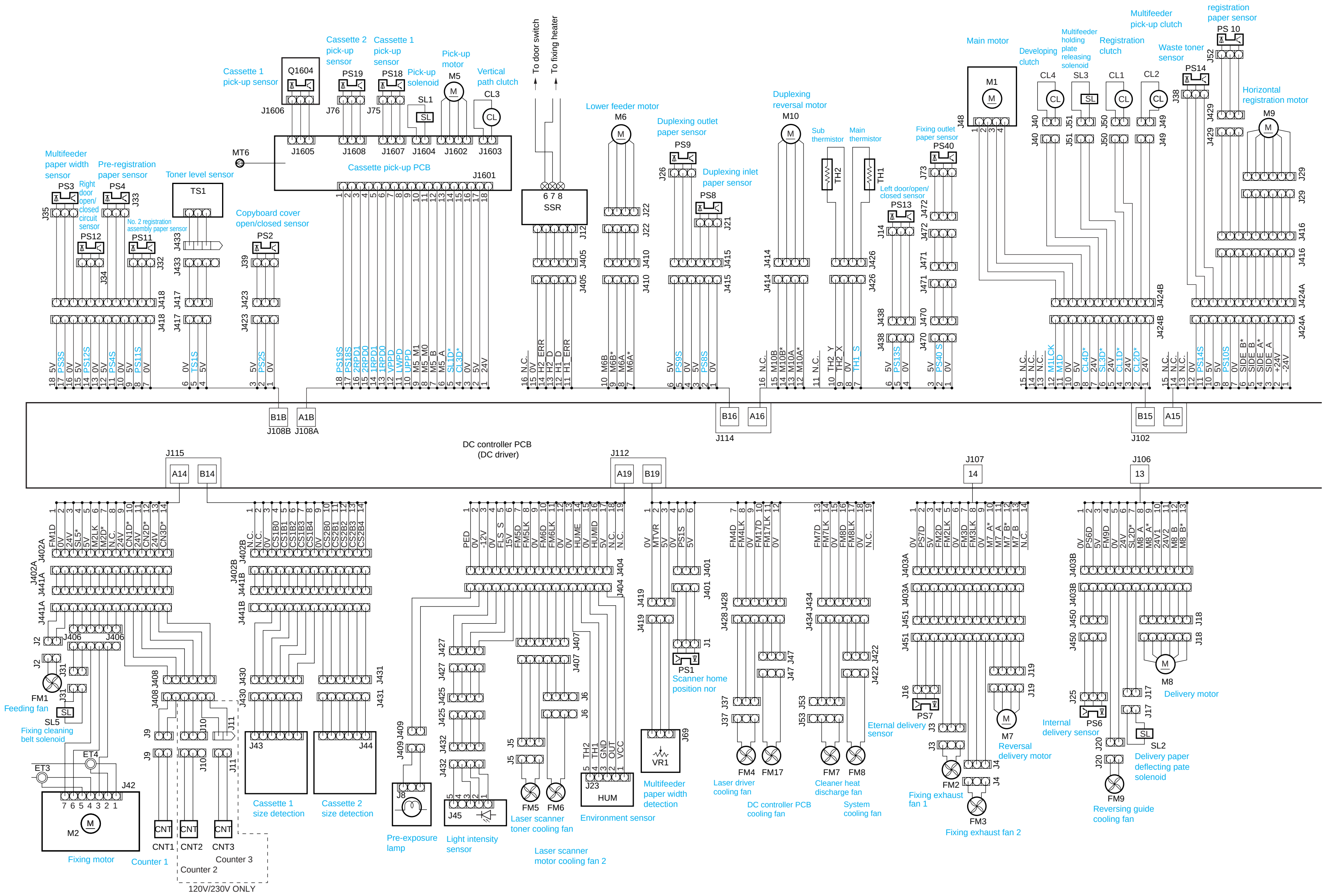
C. GENERAL CIRCUIT DIAGRAM

General Circuit Diagram (1/6)

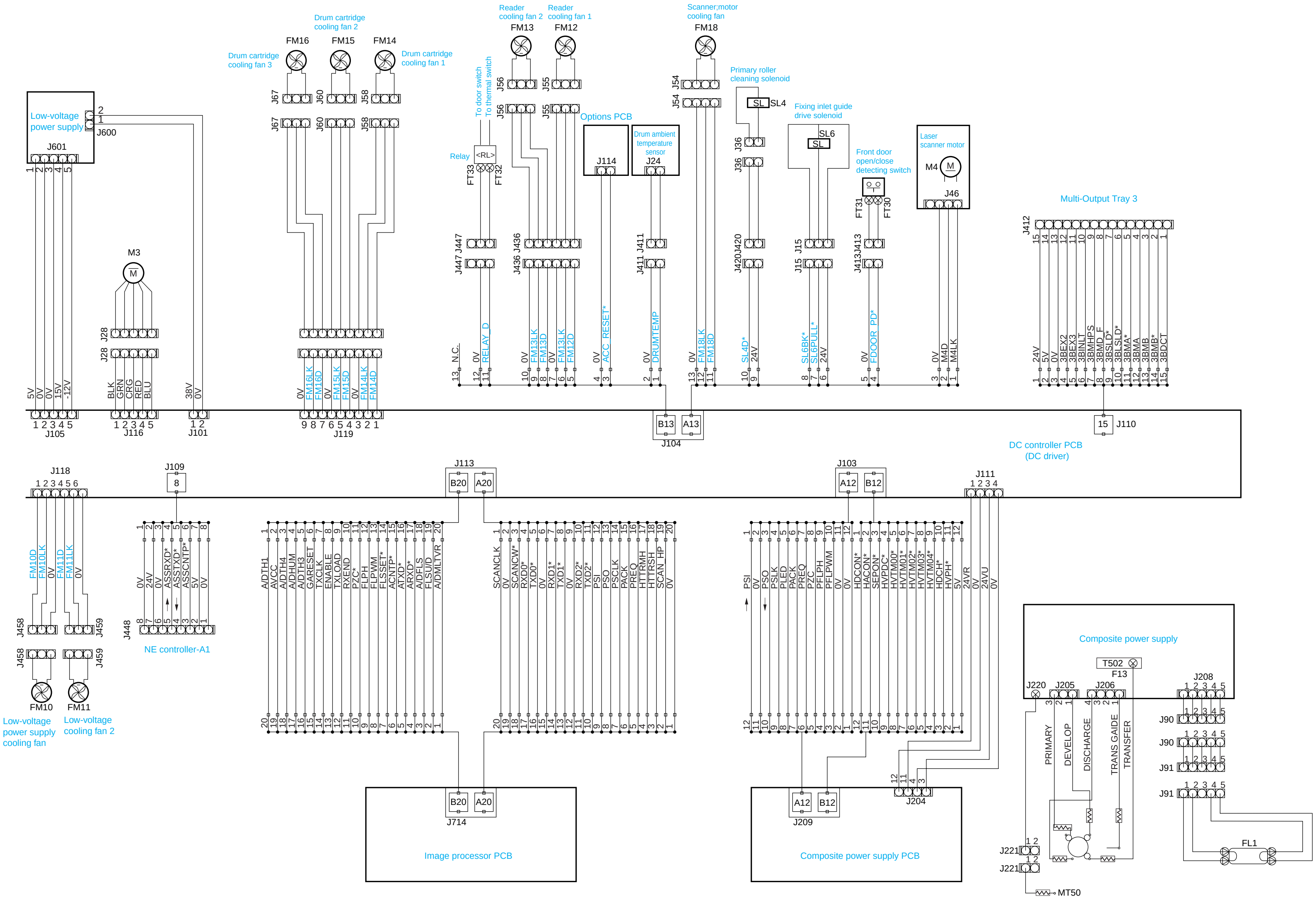


DC controller PCB
(DC driver)
J111
J101
J105
Laser scanner
motor driver PCB
Laser driver PCB
To side
paper deck
J445
J57-3
J57-4
CCD
J304
IP
J701
J501
System
motherboard
J8001
Print
motherboard
J8201
J1201
J1201
Main motor
driver PCB
J73
J57-1
J57-2
Fixing
motor PCB
SPC
J74
To
side
paper
deck
Cassette
pedestal
PCB
J59
J607
J442
J442
J444
J444
J443
J443
FINISHER
DADF
J64-1
J64-2
J64-3
J64-4
J62-1
J62-2
J62-3
J62-4
J435
REMOTE
+24V
VSS
38VU
5.1V
15V
-12V
3.4V
9V
24VR
24VU
J144
J142
J143
Accessories PCB
J141
J600
J601
J603
J602
J604
J605
Low-voltage power supply PCB
J607
J606
J203
J204
Composite power supply PCB
J998
L2
230V ONLY
J201
J210
J59-3
4
To cassette pedestal
H3 (accessory)
Cassette
heater
J495
SW2
Door switch
FT13
FT12
FT11
FT14
H
N
ET1
ET2
DC controller PCB
J114-B
J104-B
0V
H2 ERR
H2 D
H1 D
H1 ERR
RELAY D
FT33
FT32
SSR1
RL1
6
7
8
F18
F19
J497
J498
MAIN
SUBN
HOT
J493
J490
J491
SW1
FT5
FT6
FT7
FT8
230V
ONLY
L1
J502
J494
PLG1
FT1
FT2
FT3
FT4
Circuit breaker
Power supply cord mount
J610
J611
J612
J613
Filter PCB
FT9
SW3
FT10
Environment sensor
Arrester (GND)
J492
J499
J496
Fixing assembly
THSW1
SW
MT1
MT2
MT3
FA20
FA21
FT23
FT22
H2
Sub heater
Main heater
H1

General Circuit Diagram (2/6)

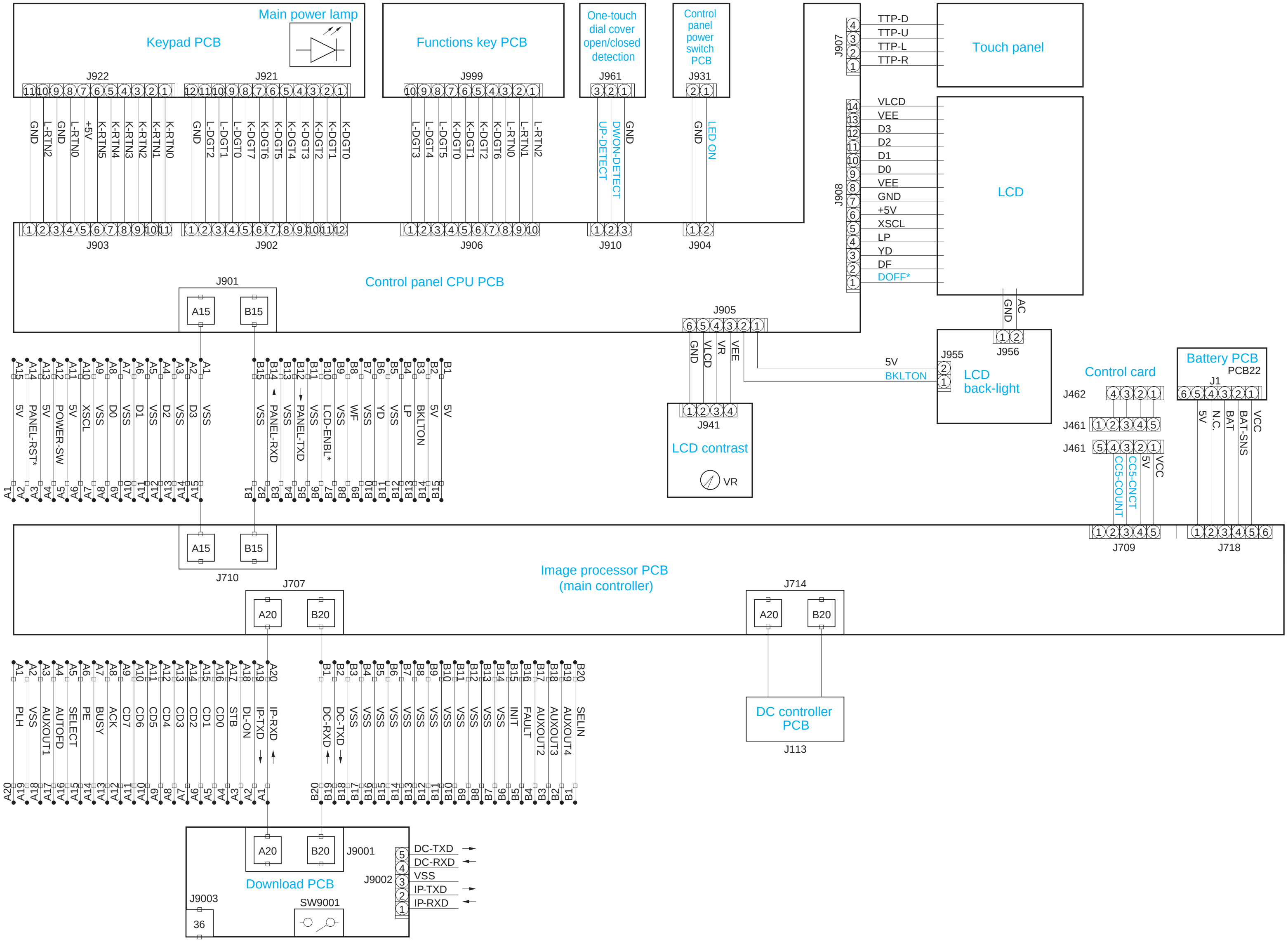

Cassette 1 pick-up sensor
Q1604
J1606
Cassette 2 pick-up sensor
PS19
J76
Cassette 1 pick-up sensor
PS18
J75
Pick-up solenoid
SL1
Pick-up motor
M5
Vertical path clutch
CL3
J1605
J1608
J1607
J1604
J1602
J1603
Cassette pick-up PCB
J1601
MT6
To door switch
To fixing heater
SSR
Lower feeder motor
M6
Duplexing outlet paper sensor
PS9
Duplexing inlet paper sensor
PS8
Duplexing reversal motor
M10
Sub thermistor
TH2
Main thermistor
TH1
Left door/open/closed sensor
PS13
Fixing outlet paper sensor
PS40
Main motor
M1
Developing clutch
CL4
Multifeeder holding plate releasing solenoid
SL3
Registration clutch
CL1
Multifeeder pick-up clutch
CL2
Waste toner sensor
PS14
Horizontal registration paper sensor
PS 10
Horizontal registration motor
M9
Multifeeder paper width sensor
PS3
Right door open/closed circuit sensor
PS4
Pre-registration paper sensor
PS12
No. 2 registration assembly paper sensor
PS11
Toner level sensor
TS1
Copyboard cover open/closed sensor
PS2
DC controller PCB
(DC driver)
J108B
J108A
J114
J102
J115
J112
J107
J106
FM1
Feeding fan
SL5
Fixing cleaning belt solenoid
ET3
ET4
J42
M2
Fixing motor
CNT1
CNT2
CNT3
Counter 1
Counter 2
Counter 3
120V/230V ONLY
J43
Cassette 1 size detection
J44
Cassette 2 size detection
J8
Pre-exposure lamp
J45
Light intensity sensor
FM5
FM6
Laser scanner toner cooling fan
Laser scanner motor cooling fan 2
J23
HUM
Environment sensor
PS1
Scanner home position nor
VR1
Multifeeder paper width detection
FM4
FM17
Laser driver cooling fan
DC controller PCB cooling fan
FM7
FM8
Cleaner heat discharge fan
System cooling fan
Eternal delivery sensor
PS7
FM2
Fixing exhaust fan 1
FM3
Fixing exhaust fan 2
M7
Reversal delivery motor
Internal delivery sensor
PS6
FM9
Reversing guide cooling fan
SL2
Delivery paper deflecting pate solenoid
M8
Delivery motor

General Circuit Diagram (3/6)



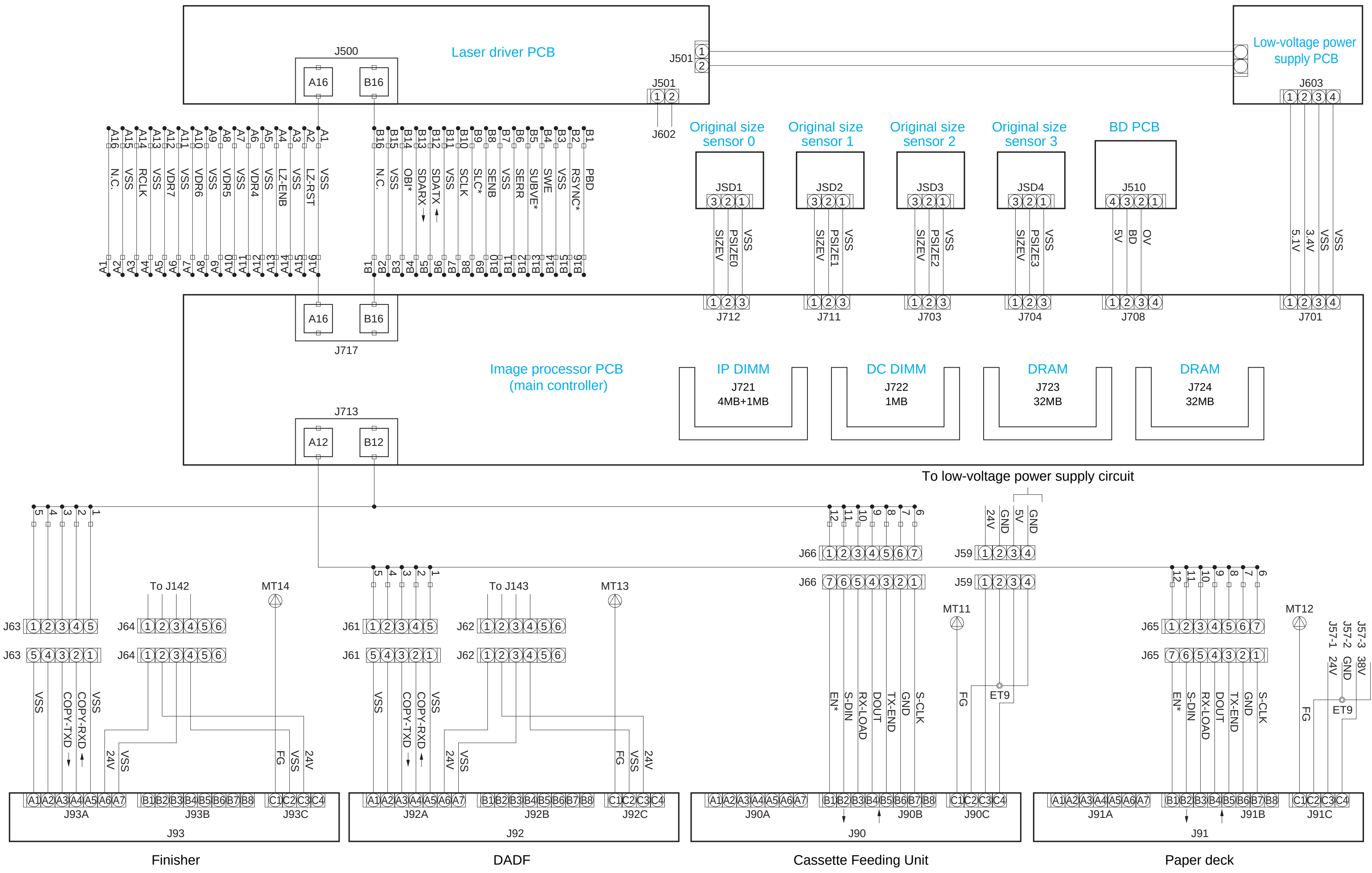
Low-voltage power supply
J600
J601
5V
0V
0V
15V
-12V
J105
M3
J28
BLK
GRN
ORG
RED
BLU
J116
38V
0V
J101
Drum cartridge cooling fan 3
Drum cartridge cooling fan 2
Drum cartridge cooling fan 1
FM16
FM15
FM14
J67
J60
J58
0V
FM16LK
FM16D
0V
FM15LK
FM15D
0V
FM14LK
FM14D
J119
To door switch
To thermal switch
Relay
<RL>
FT33
FT32
J447
N.C.
0V
RELAY_D
Reader cooling fan 2
Reader cooling fan 1
FM13
FM12
J56
J55
J436
0V
FM13LK
FM13D
0V
FM12LK
FM12D
Options PCB
J114
J411
0V
ACC_RESET*
Drum ambient temperature sensor
J24
0V
DRUMTEMP
Scanner;motor cooling fan
FM18
J54
0V
FM18LK
FM18D
J104
B13
A13
Primary roller cleaning solenoid
SL
SL4
J36
J420
SL4D*
24V
Fixing inlet guide drive solenoid
SL6
J15
SL6BK*
SL6PULL*
24V
Front door open/close detecting switch
FT31
FT30
J413
0V
FDOOR_PD*
Laser scanner motor
M4
M
J46
0V
M4D
M4LK
Multi-Output Tray 3
J412
24V
5V
0V
3BEX2
3BEX3
3BINLT
3BMHPS
3BMD_F
3BSLD*
3BLSLD*
3BMA*
3BMA
3BMB
3BMB*
3BDCT
J110
DC controller PCB (DC driver)
J118
FM10D
FM10LK
0V
FM11D
FM11LK
0V
J458
J459
FM10
FM11
Low-voltage power supply cooling fan
Low-voltage cooling fan 2
J109
J448
0V
24V
0V
ASSRXD*
ASSTXD*
ASSCNTP*
5V
0V
NE controller-A1
J113
B20
A20
A/DTH1
AVCC
A/DTH4
A/DHUM
A/DTH3
GARESET
TXCLK
ENABLE
TXLOAD
RXEND
FLPW
FLPH
FLPWM
FLSSET*
ACNTP*
ATXD*
ARXD*
ADFLS
FLSUD
A/DMLTVR
SCANCLK
0V
SCANCW*
RXD0*
TXD0*
0V
RXD1*
TXD1*
0V
RXD2*
TXD2*
PSI
PSO
PSCLK
PACK
PREQ
HTTRMH
HTTRSH
SCAN HP
0V
J714
Image processor PCB
J103
A12
B12
PSI
0V
PSO
PSLK
PLED
PACK
PREQ
PZC
PFLPH
PFLPWM
0V
0V
HDCON*
HACON*
SEPON*
HVPDC*
HVTM00*
HVTM01*
HVTM02*
HVTM03*
HVTM04*
HDCH*
HVPH*
5V
24VR
0V
24VU
0V
J111
J204
J209
Composite power supply PCB
Composite power supply
T502
F13
J220
J205
J206
J208
PRIMARY
DEVELOP
DISCHARGE
TRANS GAIDE
TRANSFER
J90
J91
J221
MT50
FL1

General Circuit Diagram (4/6)

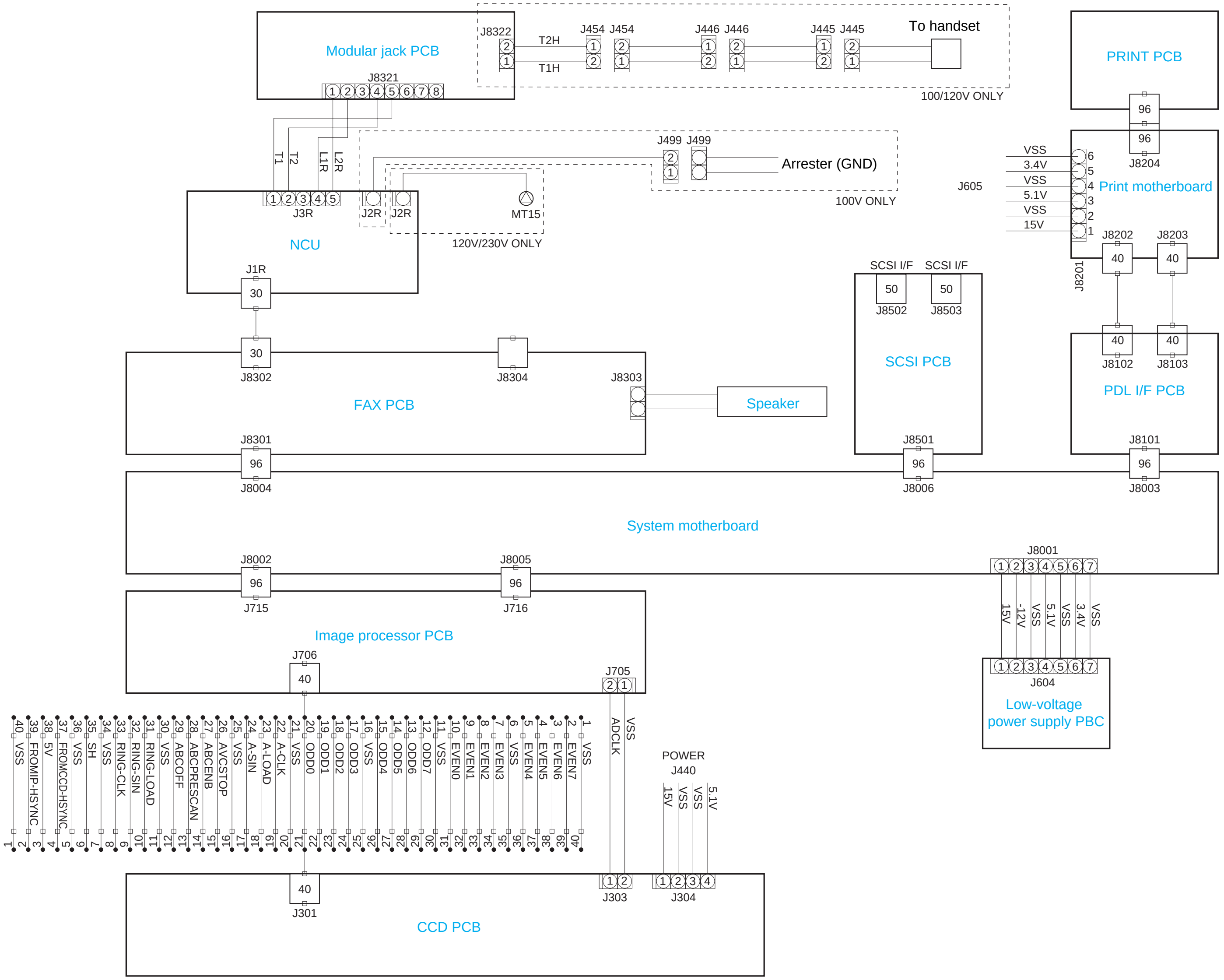

Main power lamp
Keypad PCB
J922
J921
Functions key PCB
J999
One-touch dial cover open/closed detection
J961
Control panel power switch PCB
J931
J907
TTP-D
TTP-U
TTP-L
TTP-R
Touch panel
GND
L-RTN2
GND
L-RTN0
+5V
K-RTN5
K-RTN4
K-RTN3
K-RTN2
K-RTN1
K-RTN0
GND
L-DGT2
L-DGT1
L-DGT0
K-DGT7
K-DGT6
K-DGT5
K-DGT4
K-DGT3
K-DGT2
K-DGT1
K-DGT0
L-DGT3
L-DGT4
L-DGT5
K-DGT0
K-DGT1
K-DGT2
K-DGT6
L-RTN0
L-RTN1
L-RTN2
UP-DETECT
DWON-DETECT
GND
GND
LED ON
J908
VLCD
VEE
D3
D2
D1
D0
VEE
GND
+5V
XSCL
LP
YD
DF
DOFF*
LCD
J903
J902
J906
J910
J904
J901
Control panel CPU PCB
A15
B15
J905
GND
AC
J956
J955
LCD back-light
5V
BKLTON
GND
VLCD
VR
VEE
J941
LCD contrast
VR
Control card
J462
J461
J461
CC5-COUNT
CC5-CNCT
5V
VCC
Battery PCB
PCB22
J1
5V
N.C.
BAT
BAT-SNS
VCC
5V
PANEL-RST*
5V
POWER-SW
5V
XSCL
VSS
D0
VSS
D1
VSS
D2
VSS
D3
VSS
VSS
PANEL-RXD
VSS
PANEL-TXD
VSS
LCD-ENBL*
VSS
WF
VSS
YD
VSS
LP
BKLTON
5V
5V
J709
J718
A15
B15
J710
Image processor PCB (main controller)
J707
A20
B20
J714
A20
B20
PLH
VSS
AUXOUT1
AUTOFD
SELECT
PE
BUSY
ACK
CD7
CD6
CD5
CD4
CD3
CD2
CD1
CD0
STB
DL-ON
IP-TXD
IP-RXD
DC-RXD
DC-TXD
VSS
VSS
VSS
VSS
VSS
VSS
VSS
VSS
VSS
VSS
VSS
INIT
FAULT
AUXOUT2
AUXOUT3
AUXOUT4
SELIN
DC controller PCB
J113
A20
B20
J9001
Download PCB
J9002
DC-TXD
DC-RXD
VSS
IP-TXD
IP-RXD
J9003
36
SW9001

CANON imageRUNNER 400/330 REV.0 JAN. 1999 PRINTED IN JAPAN (IMPRIME AU JAPON)

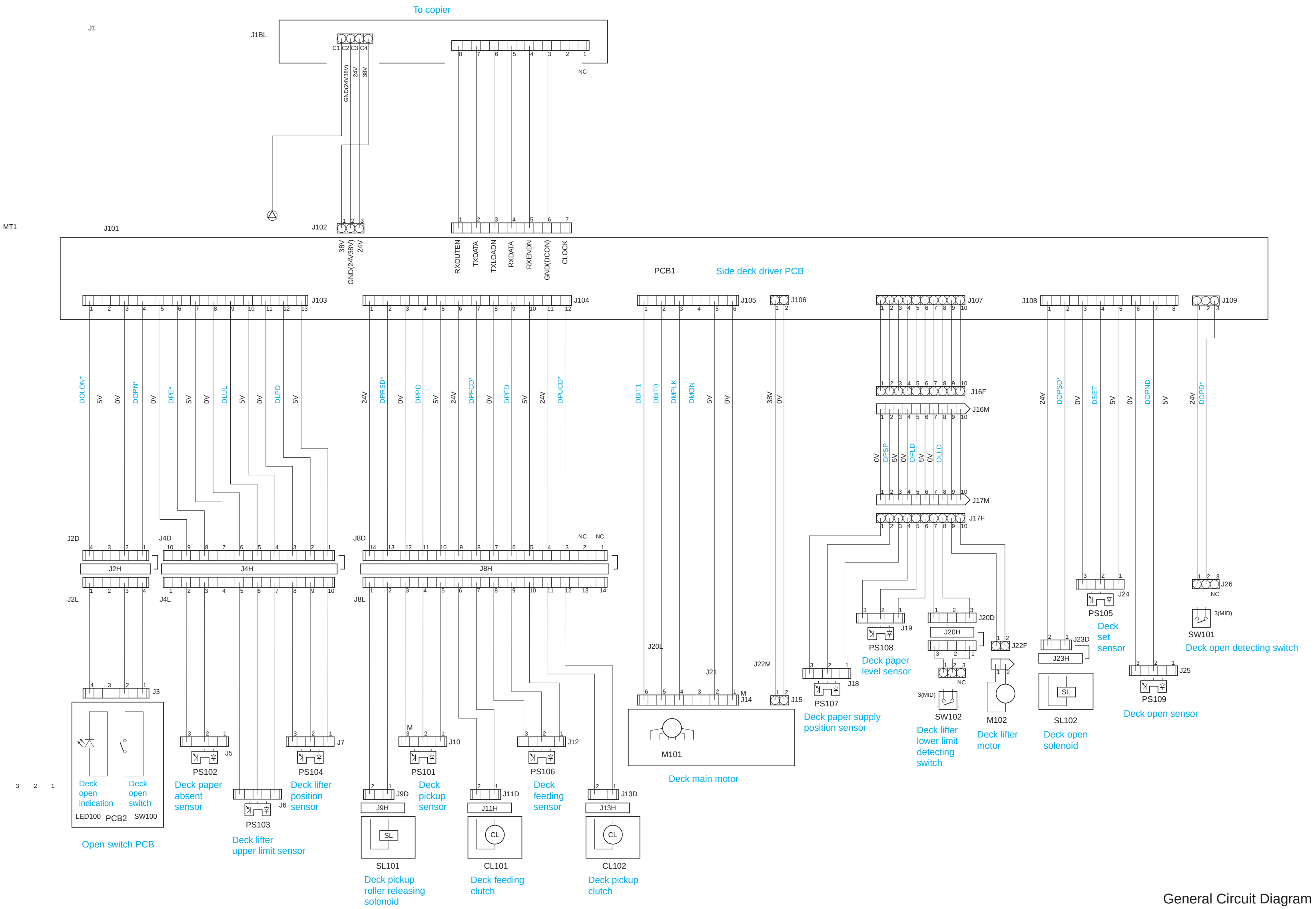
General Circuit Diagram (5/6)


Laser driver PCB
J500
A16
B16
J501
1
2
J602
Low-voltage power supply PCB
J603
1 2 3 4
A16 A15 A14 A13 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1
N.C.
VSS
RCLK
VSS
VDR7
VSS
VDR6
VSS
VDR5
VSS
VDR4
VSS
LZ-ENB
VSS
LZ-RST
VSS
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16
B16 B15 B14 B13 B12 B11 B10 B9 B8 B7 B6 B5 B4 B3 B2 B1
N.C.
VSS
OBI*
SDARX
SDATX
VSS
SCLK
SLC*
SENB
VSS
SERR
SUBVE*
SWE
VSS
RSYNC*
PBD
B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14 B15 B16
Original size sensor 0
JSD1
SIZEV
PSIZE0
VSS
J712
Original size sensor 1
JSD2
SIZEV
PSIZE1
VSS
J711
Original size sensor 2
JSD3
SIZEV
PSIZE2
VSS
J703
Original size sensor 3
JSD4
SIZEV
PSIZE3
VSS
J704
BD PCB
J510
5V
BD
0V
J708
5.1V
3.4V
VSS
VSS
J701
J717
Image processor PCB (main controller)
IP DIMM
J721
4MB+1MB
DC DIMM
J722
1MB
DRAM
J723
32MB
DRAM
J724
32MB
J713
A12
B12
To low-voltage power supply circuit
24V
GND
5V
GND
J59
J66
12 11 10 9 8 7 6
To J142
To J143
MT14
MT13
MT11
MT12
J63
J64
J61
J62
J65
VSS
COPY-TXD
COPY-RXD
VSS
24V
VSS
FG
VSS
24V
EN*
S-DIN
RX-LOAD
DOUT
TX-END
GND
S-CLK
FG
ET9
J57-1 24V
J57-2 GND
J57-3 38V
J57-4 GND
A1 A2 A3 A4 A5 A6 A7
B1 B2 B3 B4 B5 B6 B7 B8
C1 C2 C3 C4
J93A
J93B
J93C
J93
Finisher
J92A
J92B
J92C
J92
DADF
J90A
J90B
J90C
J90
Cassette Feeding Unit
J91A
J91B
J91C
J91
Paper deck

General Circuit Diagram (6/6)


Modular jack PCB
J8322
T2H
T1H
J8321
J454 J454
J446 J446
J445 J445
To handset
100/120V ONLY
PRINT PCB
96
96
J8204
VSS
3.4V
VSS
5.1V
VSS
15V
J605
Print motherboard
J8202
J8203
40
40
J8201
T1
T2
L1R
L2R
J499 J499
Arrester (GND)
100V ONLY
J3R
J2R
J2R
MT15
120V/230V ONLY
NCU
J1R
30
30
J8302
J8304
J8303
FAX PCB
Speaker
SCSI I/F
SCSI I/F
50
50
J8502
J8503
SCSI PCB
40
40
J8102
J8103
PDL I/F PCB
J8301
96
J8004
J8501
96
J8006
J8101
96
J8003
System motherboard
J8001
15V
-12V
VSS
5.1V
VSS
3.4V
VSS
J8002
96
J715
J8005
96
J716
Image processor PCB
J706
40
J705
J604
Low-voltage power supply PBC
40 VSS
39 FROMIP-HSYNC
38 5V
37 FROMCCD-HSYNC
36 VSS
35 SH
34 VSS
33 RING-CLK
32 RING-SIN
31 RING-LOAD
30 VSS
29 ABCOFF
28 ABCPRESCAN
27 ABCENB
26 AVCSTOP
25 VSS
24 A-SIN
23 A-LOAD
22 A-CLK
21 VSS
20 ODD0
19 ODD1
18 ODD2
17 ODD3
16 VSS
15 ODD4
14 ODD5
13 ODD6
12 ODD7
11 VSS
10 EVEN0
9 EVEN1
8 EVEN2
7 EVEN3
6 VSS
5 EVEN4
4 EVEN5
3 EVEN6
2 EVEN7
1 VSS
ADCLK
VSS
POWER
J440
15V
VSS
VSS
5.1V
40
J301
J303
J304
CCD PCB

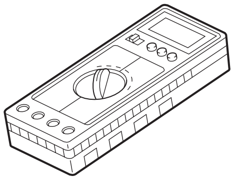
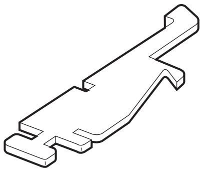
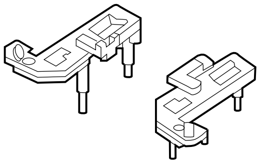
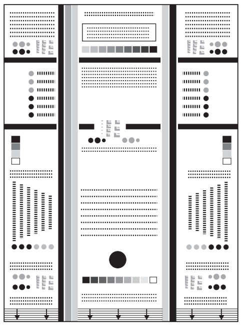
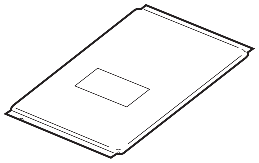
D. SIDE PAPER DECK GENERAL CIRCUIT DIAGRAM

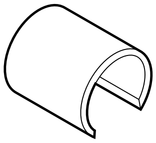
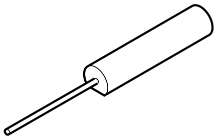
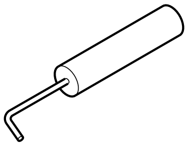

To copier
J1
J1BL
C1 C2 C3 C4
GND(24V38V)
24V
38V
NC
MT1
J101
J102
38V
GND(24V38V)
24V
RXOUTEN
TXDATA
TXLOADN
RXDATA
RXENDN
GND(DCON)
CLOCK
PCB1
Side deck driver PCB
J103
J104
J105
J106
J107
J108
J109
DOLON*
5V
0V
DOPN*
0V
DPE*
5V
0V
DLUL
5V
0V
DLPD
5V
24V
DPRSD*
0V
DPPD
5V
24V
DPFCD*
0V
DPFD
5V
24V
DPUCD*
DBIT1
DBIT0
DMPLK
DMON
5V
0V
38V
0V
J16F
J16M
0V
DPSP
5V
0V
DPLD
5V
0V
DLLD
J17M
J17F
24V
DOPSD*
0V
DSET
5V
0V
DOPND
5V
24V
DOPD*
J2D
J2H
J2L
J4D
J4H
J4L
J8D
J8H
J8L
NC
J3
J5
J6
J7
J10
J12
J9D
J9H
J11D
J11H
J13D
J13H
J14
J15
J18
J19
J20D
J20H
J20L
J21
J22M
J22F
J23D
J23H
J24
J25
J26
M
LED100
PCB2
SW100
Deck open indication
Deck open switch
Open switch PCB
PS102
Deck paper absent sensor
PS103
Deck lifter upper limit sensor
PS104
Deck lifter position sensor
PS101
Deck pickup sensor
PS106
Deck feeding sensor
SL
SL101
Deck pickup roller releasing solenoid
CL
CL101
Deck feeding clutch
CL102
Deck pickup clutch
M101
Deck main motor
PS107
Deck paper supply position sensor
PS108
Deck paper level sensor
3(MID)
SW102
Deck lifter lower limit detecting switch
M102
Deck lifter motor
SL102
Deck open solenoid
PS105
Deck set sensor
PS109
Deck open sensor
SW101
Deck open detecting switch

General Circuit Diagram

E. SPECIAL TOOLS

You will need the following special tools when servicing the machine in addition to the standard tools set.

No.	Tool name	Tool No.	View	Rank	Remarks
1	Digital Multimeter	FY9-2002-000		A	For making electrical checks; e.g., when adjusting laser intensity together with the Laser Power Checker.
2	Door Switch Actuator	TKN-0093		A	
3	Mirror Positioning Tool (front, rear)	FY9-3009-040		B	For adjusting the position of No. 1/No. 2 mirror.
4	NA-3 Test Sheet	FY9-9196-000		A	For adjusting images and making checks.
5	Standard White Paper	FY9-3004-000		B	For shading correction (20 sheets/ pack).

No.	Tool name	Tool No.	View	Rank	Remarks
6	Pulley Clip	FY9-3037-000		C	For adjusting the tension of the scanner cable.
7	Tester Extension Pin	FY9-3038-000		A	For making electrical checks; i.e., serving as an attachment to a meter.
8	Tester Extension Pin (L-shaped tip)	FY9-3039-000		A	For making electrical checks; i.e., serving as an attachment to a meter.

Rank:
A: Each service person is expected to carry one.
B: Each group of five or so service persons is expected to carry one.
C: Each workshop is expected to keep one.

F. SOLVENTS AND OILS

No.	name	Uses	Composition	Remarks
1	Alcohol	Cleaning: e.g., glass, plastic, rubber; external covers.	Fluorine family hydro carbon Alcohol Surface activating agent Water	• Do not bring near fire. • Procure locally. • IPA (isopropyl alcohol)
2	Solvent	Cleaning: e.g., metal; removing oil or toner.	Fluorine family hydro carbon Chlorine family hydro carbon Alcohol	• Do not bring near fire. • Procure locally.
3	Heat-resisting grease	Lubricating: e.g., fixing drive assembly.	Mineral oil family lithium Soap Molybdenum disulfide	• Tool No. CK-0427 (500 g/can)
4	Lubricating oil	Lubricating: e.g., scanner rail, spring clutch	Mineral oil (paraffin family)	• Tool No. CK-0451 (100 cc)
5	Lubricating oil	Lubricating: e.g., pickup assembly feeding roller bushing (FS2-1005-000)	Mineral oil (paraffin family)	• Tool No. CK-0524 (100 cc)
6	Lubricating oil	Lubricating: e.g., friction parts	Silicone oil	• Tool No. CK-0551 (20 g)

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imageRUNNER 400E/400S
imageRUNNER 330E/330S

PARTS CATALOG

REVISION 0

Canon

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DU7-3102-010

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序

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キヤノン株式会社
映像事務機TS推進部
映像事務機TS推進1課

PREFACE

This Parts Catalog contains listings of parts used in the imageRUNNER 400E/400S/330E/330S. Diagrams are provided with the listings to aid the service technician in identifying clearly, the item to be ordered.

Whenever ordering parts, consult this Parts Catalog for all of the information pertaining to each item. Be sure to include, in the Parts Request, the full item description, the item part number and the quantity.

Canon Inc.

Office Imaging Products Technical Support Dept.1
Office Imaging Products Technical Support Div.
5-1, Hakusan 7-chome,
Toride-shi, Ibaraki 302-8501, Japan

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万一取扱を誤りますと法律で処罰されることがあります。
Use of this manual should be strictly supervised to avoid disclosure of confidential information.

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— imageRUNNER 400E/400S/330E/330S —

A. ASSEMBLY LOCATION DIAGRAM

100. EXTERNAL COVERS, PANELS, ETC.
101. MACHINE FRONT PLATE
102. INTERNAL COMPONENTS 1
103. INTERNAL COMPONENTS 2
104. INTERNAL COMPONENTS 3
105. MACHINE REAR PLATE 1
106. MACHINE REAR PLATE 2
110. POWER CORD TERMINAL ASSEMBLY (100/120V)
111. POWER CORD TERMINAL ASSEMBLY (220/240V)
120. RIGHT DOOR ASSEMBLY
130. CONTROL PANEL ASSEMBLY
160. COPYBOARD COVER ASSEMBLY (GP35/31)
180. COUNTER ASSEMBLY
191. LASER COOLING FAN ASSEMBLY

210. LENS MOUNT ASSEMBLY
250. MAIN DRIVE ASSEMBLY
280. FIXING DRIVE ASSEMBLY

300. CASSETTE
310. PAPER PICK-UP ASSEMBLY
326. MULTI FEEDER TRAY ASSEMBLY
330. PAPER FEEDER ASSEMBLY
335. LOWER PAPER FEEDER ASSEMBLY
341. REGISTRATION FRONT GUIDE ASSEMBLY
350. PAPER DELIVERY ASSEMBLY

400. MIRROR ASSEMBLY 1
401. MIRROR ASSEMBLY 2
460. SCANNER ASSEMBLY

640. DEVELOPING ASSEMBLY

810. FIXING ASSEMBLY
830. FIXING CLEANING ASSEMBLY

900. PCB LOCATION DIAGRAM
910. DC POWER SUPPLY PCB ASSEMBLY
920. CONTROL PANEL CPU PCB ASSEMBLY
925. CONTROL PANEL KEY PCB ASSEMBLY
926. INVERTER PCB ASSEMBLY
930. DC CONTROLLER PCB ASSEMBLY
940. PAPER PICK-UP PCB ASSEMBLY
950. IMAGE PROCESSOR PCB ASSEMBLY
991. FAX ASSEMBLY (GP35F/31F/iR400E/330E)
992. FAX BOARD PCB ASSEMBLY (GP35F/31F/iR400E/330E)
995. EXPANSION BOARD ASSEMBLY (GP405 RNX/GP335 RNY)
999. HAND SET ASSEMBLY (GP35F/31F)

B. LIST OF CONNECTORS

— Multi PDL Printer Board-H1 —

FA. ASSEMBLY LOCATION DIAGRAM

F10. PS/PCL PRINTER BOARD KIT

F90. PS/PCL PRINTER BOARD PCB ASSEMBLY
F95. PDL INTERFACE PCB ASSEMBLY

FB. LIST OF CONNECTORS

— Battery Board-A1 —

FA. ASSEMBLY LOCATION DIAGRAM

F97. BATTERY BOARD PCB ASSEMBLY

— Super G3 FAX Unit-E1 —

GA. ASSEMBLY LOCATION DIAGRAM

G10. FAX KIT

G90. FAX BOARD PCB ASSEMBLY

GB. LIST OF CONNECTORS

— Expansion Board Base Unit-C1 —

GA. ASSEMBLY LOCATION DIAGRAM

G11. EXPANSION BOARD ASSEMBLY

GB. LIST OF CONNECTORS

— Super G3 FAX Board-F1 —

CONTENTS

GA. ASSEMBLY LOCATION DIAGRAM

G12. FAX KIT

G92. FAX BOARD PCB ASSEMBLY

GB. LIST OF CONNECTORS

— Multi Port Kit-A1 —

GA. ASSEMBLY LOCATION DIAGRAM

G95. MULTI PORT KIT

GB. LIST OF CONNECTORS

— Handset-C1 —

GA. ASSEMBLY LOCATION DIAGRAM

G97. HAND SET KIT

— Network Interface Board-C1 —

NA. ASSEMBLY LOCATION DIAGRAM

N90. ETHERNET BOARD PCB ASSEMBLY

— LIPS Printer Board-D1 —

UA. ASSEMBLY LOCATION DIAGRAM

U10. LIPS PRINTER BOARD KIT

U90. LIPS PRINTER BOARD PCB ASSEMBLY
U95. PDL INTERFACE PCB ASSEMBLY

UB. LIST OF CONNECTORS

— SCSI Interface Board-D1 —

YA. ASSEMBLY LOCATION DIAGRAM

Y90. SCSI BOARD PCB ASSEMBLY

C. LIST OF STANDARD FASTENERS

D1. NUMERICAL INDEX (imageRUNNER 400E/400S/330E/330S)
D2. NUMERICAL INDEX (Multi PDL Printer Board-H1)
D3. NUMERICAL INDEX (Battery Board-A1)
D4. NUMERICAL INDEX (Super G3 FAX Unit-E1)
D5. NUMERICAL INDEX (Expansion Board Base Unit-C1)
D6. NUMERICAL INDEX (Super G3 FAX Board-F1)
D7. NUMERICAL INDEX (Multi Port Kit-A1)
D8. NUMERICAL INDEX (Handset-C1)
D9. NUMERICAL INDEX (Network Interface Board-C1)
D10. NUMERICAL INDEX (LIPS Printer Board-D1)
D11. NUMERICAL INDEX (SCSI Interface Board-D1)

HOW TO USE PART LISTS

Assembly Location Diagrams. These diagrams show the locations of major assemblies of the copier. Their names are identified in rectangular boxes. Below each box is the number of the Figure which shows an exploded view of the assembly.

Finding a Parts Number. Refer to the Assembly Location Diagrams and find the Figure Number of the assembly of interest. Turn to the page(s), locate the part on the exploded view, and find its Key Number. Refer to the Parts List on the page facing the exploded view and find the Key Number, Part Number and quantity required for your type of machine.

Note : While looking for a Part Number, pay particular attention to the voltage listed in the SERIAL NUMBER/REMARKS column to ensure that the Part Number selected is for your type of machine. Immediate shipping or action regarding the part depends on using its correct Part Number.

Parts List pages. The Parts List pages contain the following columns and information.

(1) Figure and Key Number column. The first column shows the Figure Number of the illustration corresponding to the Parts List, and the Key Number that identifies the part on the illustration.

(2) Part Number. The second column shows the Part Number for the part. This Number must be used when ordering replacement parts. The parts and assemblies identified as "NPN" do not have parts numbers or are not in stock, i.e., they are not available for ordering.

Note : The last three digits (suffix) of the Parts Number are called the Revision Number. The Revision Number is changed if the part is modified. Information regarding such changes will be provided by Service Information Bulletins. These Bulletins should be read carefully.

(3) Rank N. Parts marked "N" are service parts, but are not stock items. They are produced on a special-order basis.

(4) Quantity column. The quantity shown in this column is the number of parts used in the Figure. However, the quantity listed for an assembly indicates the number of that assembly per machine.

The letters in this column indicate that the quantity of a part is not specified, allowing the use of the number of parts needed for assembly and that the quantity cannot be mentioned clearly.

RF... listed for reference only.
AR... quantity not specified or cannot be specified; used in quantities as necessary at time of assembly.

(5) Description column. The Description col-umn lists the description that should be used when ordering the part.

(6) Serial Number/Remarks. When there

are differences in the specifications of power supply voltage, frequency, etc., the differences are described in words or indicated by one, two or three letters in front of the serial number.

(Example)

Serial number ABC00001
└—These are the
descriptive indicator.

If a modified model and a part are no longer interchangeable, the serial number of copiers for which the part can be used is shown in this column. If there is no indication the part can be used with all models.

Connectors list. Part numbers of connectors used in copiers and designated as Service Parts are listed in numerical order by connector number.

For connectors of which the housing and contacts are a single unit, there are no part numbers for the contact.

Connectors that are mounted on PCBs are indicated as "PCB" in the connector column. The part numbers for these connectors should be looked for in the PCB parts list.

List of Standard Fasteners. This specificationslist incorporates screws, nuts, washers and shim washers, retaining rings, pins, and spacers that are used in all copiers (including optional equipment).

Numerical Index. There is a Numerical Index at the end of this catalog; it lists in numerical order every Part Number contained in the Parts Lists. The Numerical Index contains the following columns and information.

(1) Part Number. The first column shows the Part Number.

(2) Figure and Key Number column. The second column lists the Figure and Key Number for each occurrence of the part in the illustrations.

imageRUNNER 400E/400S
imageRUNNER 330E/330S

imageRUNNER 400E
[120V 60hz F13-6630 NNU00001-]

imageRUNNER 400S
[120V 60hz F13-6639 NNV00001-]

imageRUNNER 330E
[120V 60hz F13-6620 NNX00001-]

imageRUNNER 330S
[120V 60hz F13-6632 NNY00001-]

CONTENTS

A. ASSEMBLY LOCATION DIAGRAM

100. EXTERNAL COVERS, PANELS, ETC.
101. MACHINE FRONT PLATE
102. INTERNAL COMPONENTS 1
103. INTERNAL COMPONENTS 2
104. INTERNAL COMPONENTS 3
105. MACHINE REAR PLATE 1
106. MACHINE REAR PLATE 2
110. POWER CORD TERMINAL ASSEMBLY (100/120V)
111. POWER CORD TERMINAL ASSEMBLY (220/240V)
120. RIGHT DOOR ASSEMBLY
130. CONTROL PANEL ASSEMBLY
160. COPYBOARD COVER ASSEMBLY (GP35/31)
180. COUNTER ASSEMBLY
191. LASER COOLING FAN ASSEMBLY

210. LENS MOUNT ASSEMBLY
250. MAIN DRIVE ASSEMBLY
280. FIXING DRIVE ASSEMBLY

300. CASSETTE
310. PAPER PICK-UP ASSEMBLY
326. MULTI FEEDER TRAY ASSEMBLY
330. PAPER FEEDER ASSEMBLY
335. LOWER PAPER FEEDER ASSEMBLY
341. REGISTRATION FRONT GUIDE ASSEMBLY
350. PAPER DELIVERY ASSEMBLY

400. MIRROR ASSEMBLY 1
401. MIRROR ASSEMBLY 2
460. SCANNER ASSEMBLY

640. DEVELOPING ASSEMBLY

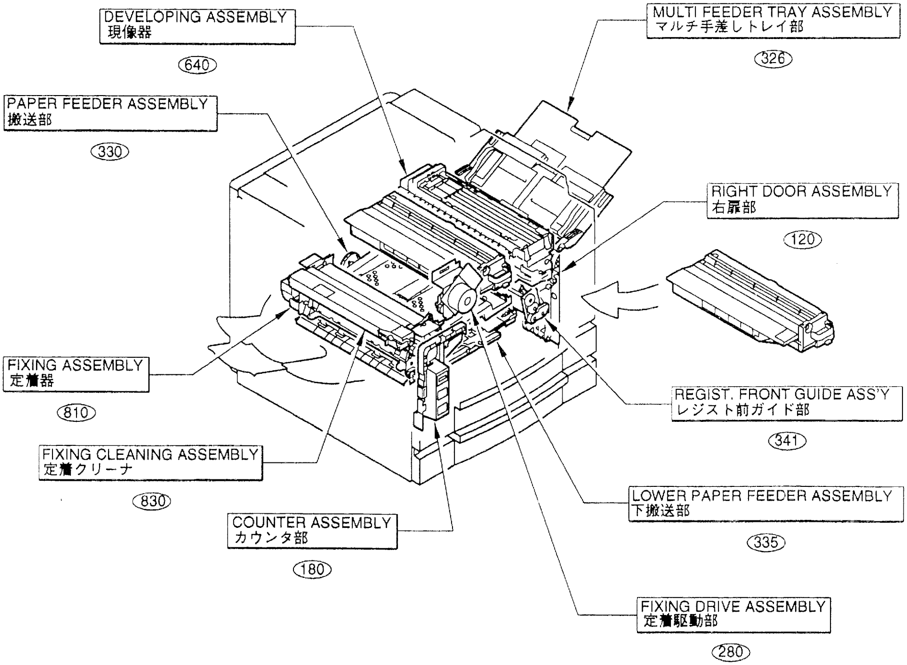
810. FIXING ASSEMBLY
830. FIXING CLEANING ASSEMBLY

900. PCB LOCATION DIAGRAM
910. DC POWER SUPPLY PCB ASSEMBLY
920. CONTROL PANEL CPU PCB ASSEMBLY
925. CONTROL PANEL KEY PCB ASSEMBLY
926. INVERTER PCB ASSEMBLY
930. DC CONTROLLER PCB ASSEMBLY
940. PAPER PICK-UP PCB ASSEMBLY
950. IMAGE PROCESSOR PCB ASSEMBLY
991. FAX ASSEMBLY (GP35F/31F/iR400E/330E)
992. FAX BOARD PCB ASSEMBLY (GP35F/31F/iR400E/330E)
995. EXPANSION BOARD ASSEMBLY (GP405 RNX/GP335 RNY)
999. HAND SET ASSEMBLY (GP35F/31F)

B. LIST OF CONNECTORS

D1. NUMERICAL INDEX

FIGURE A ASSEMBLY LOCATION DIAGRAM(1/10)
主要部品配置図(1/10)


DEVELOPING ASSEMBLY
現像器
640
MULTI FEEDER TRAY ASSEMBLY
マルチ手差しトレイ部
326
PAPER FEEDER ASSEMBLY
搬送部
330
RIGHT DOOR ASSEMBLY
右扉部
120
FIXING ASSEMBLY
定着器
810
REGIST. FRONT GUIDE ASS'Y
レジスト前ガイド部
341
FIXING CLEANING ASSEMBLY
定着クリーナ
830
LOWER PAPER FEEDER ASSEMBLY
下搬送部
335
COUNTER ASSEMBLY
カウンタ部
180
FIXING DRIVE ASSEMBLY
定着駆動部
280

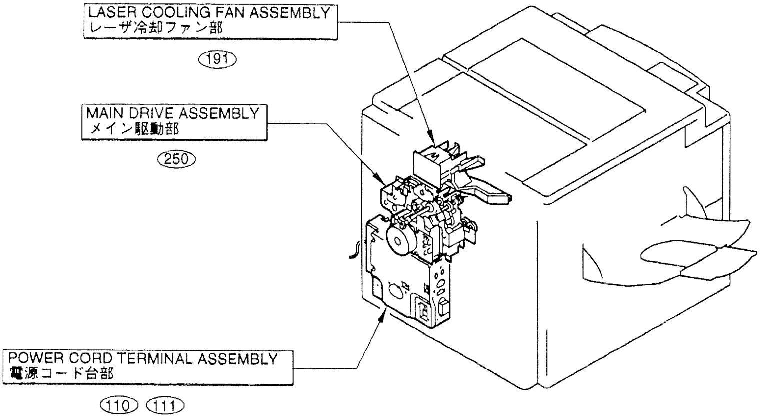
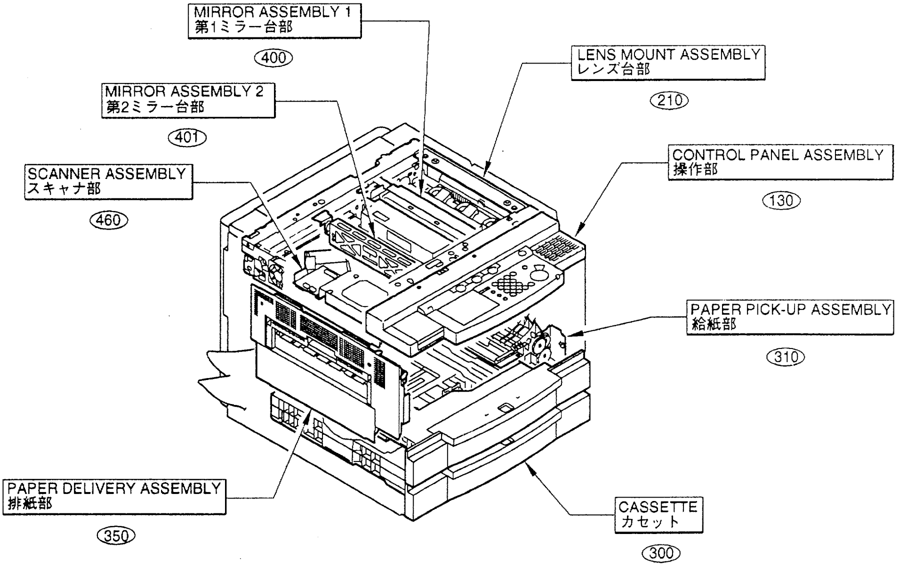

LASER COOLING FAN ASSEMBLY
レーザ冷却ファン部
191
MAIN DRIVE ASSEMBLY
メイン駆動部
250
POWER CORD TERMINAL ASSEMBLY
電源コード台部
110
111

FIGURE A ASSEMBLY LOCATION DIAGRAM(2/10)
主要部品配置図(2/10)


MIRROR ASSEMBLY 1
第1ミラー台部
400
LENS MOUNT ASSEMBLY
レンズ台部
210
MIRROR ASSEMBLY 2
第2ミラー台部
401
CONTROL PANEL ASSEMBLY
操作部
130
SCANNER ASSEMBLY
スキャナ部
460
PAPER PICK-UP ASSEMBLY
給紙部
310
PAPER DELIVERY ASSEMBLY
排紙部
350
CASSETTE
カセット
300

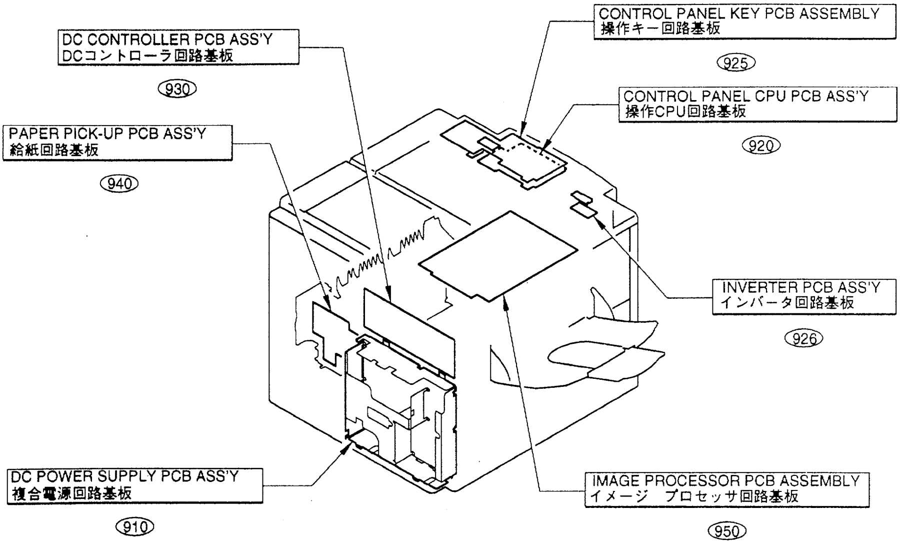
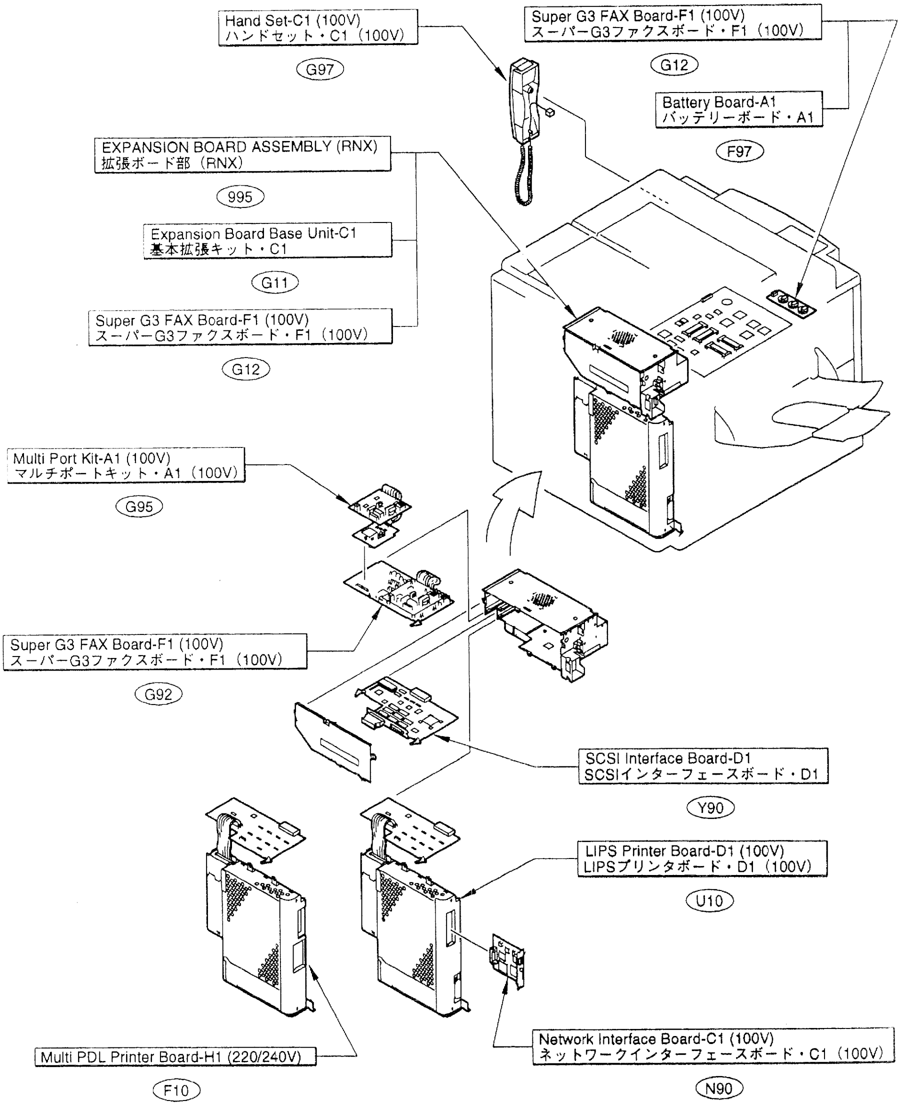

CONTROL PANEL KEY PCB ASSEMBLY
操作キー回路基板
925
DC CONTROLLER PCB ASS'Y
DCコントローラ回路基板
930
CONTROL PANEL CPU PCB ASS'Y
操作CPU回路基板
920
PAPER PICK-UP PCB ASS'Y
給紙回路基板
940
INVERTER PCB ASS'Y
インバータ回路基板
926
DC POWER SUPPLY PCB ASS'Y
複合電源回路基板
910
IMAGE PROCESSOR PCB ASSEMBLY
イメージ プロセッサ回路基板
950

FIGURE A ASSEMBLY LOCATION DIAGRAM(3/10)
主要部品配置図(3/10)

GP405



Hand Set-C1 (100V)
ハンドセット・C1 (100V)
G97

Super G3 FAX Board-F1 (100V)
スーパーG3ファクスボード・F1 (100V)
G12

Battery Board-A1
バッテリーボード・A1
F97

EXPANSION BOARD ASSEMBLY (RNX)
拡張ボード部 (RNX)
995

Expansion Board Base Unit-C1
基本拡張キット・C1
G11

Super G3 FAX Board-F1 (100V)
スーパーG3ファクスボード・F1 (100V)
G12

Multi Port Kit-A1 (100V)
マルチポートキット・A1 (100V)
G95

Super G3 FAX Board-F1 (100V)
スーパーG3ファクスボード・F1 (100V)
G92

SCSI Interface Board-D1
SCSIインターフェースボード・D1
Y90

LIPS Printer Board-D1 (100V)
LIPSプリンタボード・D1 (100V)
U10

Multi PDL Printer Board-H1 (220/240V)
F10

Network Interface Board-C1 (100V)
ネットワークインターフェースボード・C1 (100V)
N90

FIGURE A ASSEMBLY LOCATION DIAGRAM(4/10)
主要部品配置図(4/10)

GP355 (100V)
GP315 (100V)

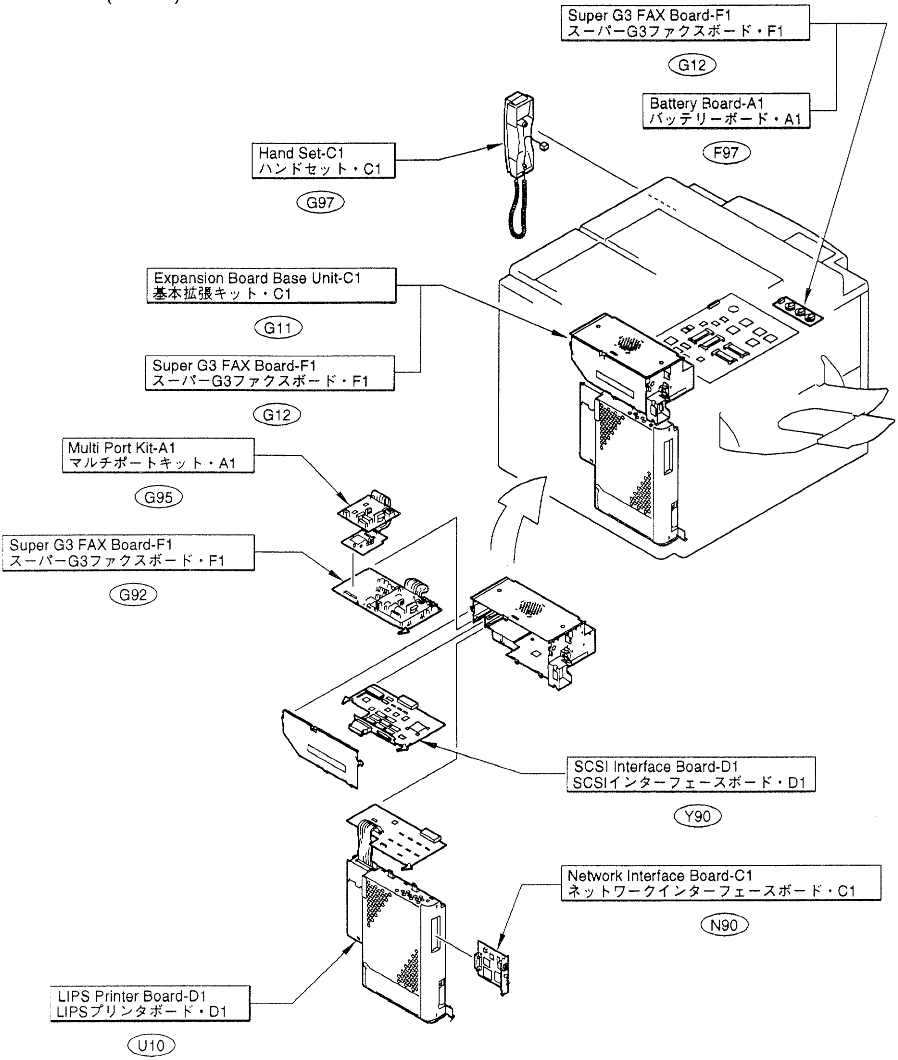

Super G3 FAX Board-F1
スーパーG3ファクスボード・F1
G12
Battery Board-A1
バッテリーボード・A1
F97
Hand Set-C1
ハンドセット・C1
G97
Expansion Board Base Unit-C1
基本拡張キット・C1
G11
Super G3 FAX Board-F1
スーパーG3ファクスボード・F1
G12
Multi Port Kit-A1
マルチポートキット・A1
G95
Super G3 FAX Board-F1
スーパーG3ファクスボード・F1
G92
SCSI Interface Board-D1
SCSIインターフェースボード・D1
Y90
Network Interface Board-C1
ネットワークインターフェースボード・C1
N90
LIPS Printer Board-D1
LIPSプリンタボード・D1
U10

FIGURE A ASSEMBLY LOCATION DIAGRAM(5/10)
主要部品配置図(5/10)

GP335 (220/240V)

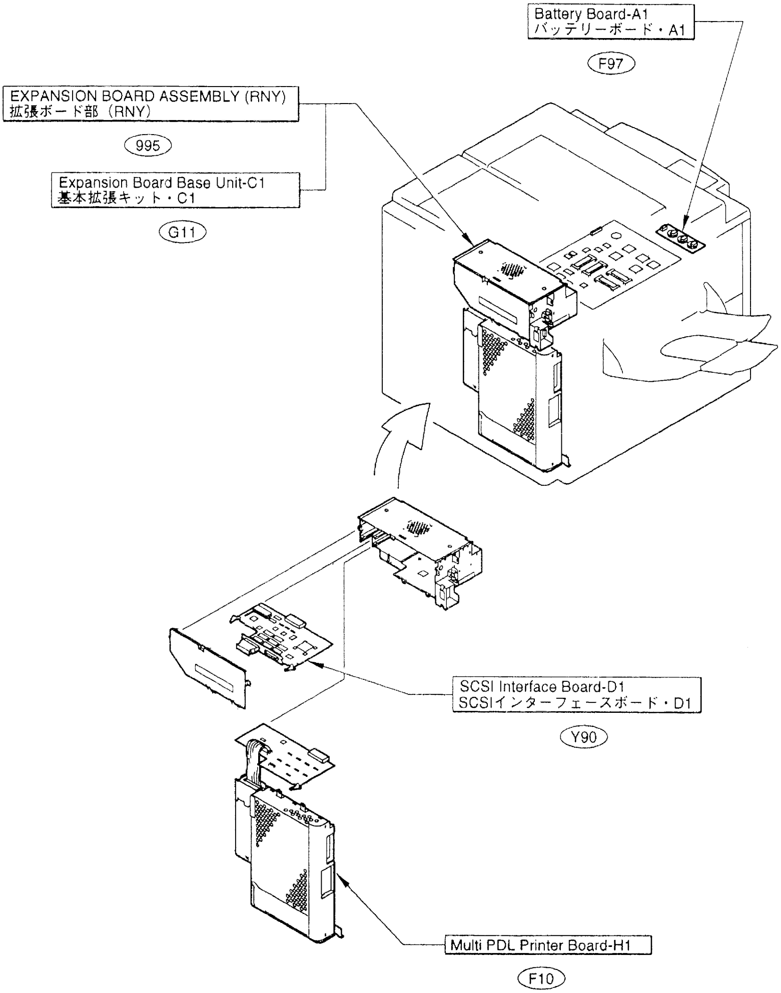

Battery Board-A1
バッテリーボード・A1
F97
EXPANSION BOARD ASSEMBLY (RNY)
拡張ボード部（RNY）
995
Expansion Board Base Unit-C1
基本拡張キット・C1
G11
SCSI Interface Board-D1
SCSIインターフェースボード・D1
Y90
Multi PDL Printer Board-H1
F10

FIGURE A ASSEMBLY LOCATION DIAGRAM(6/10)
主要部品配置図(6/10)

GP40 (100V)

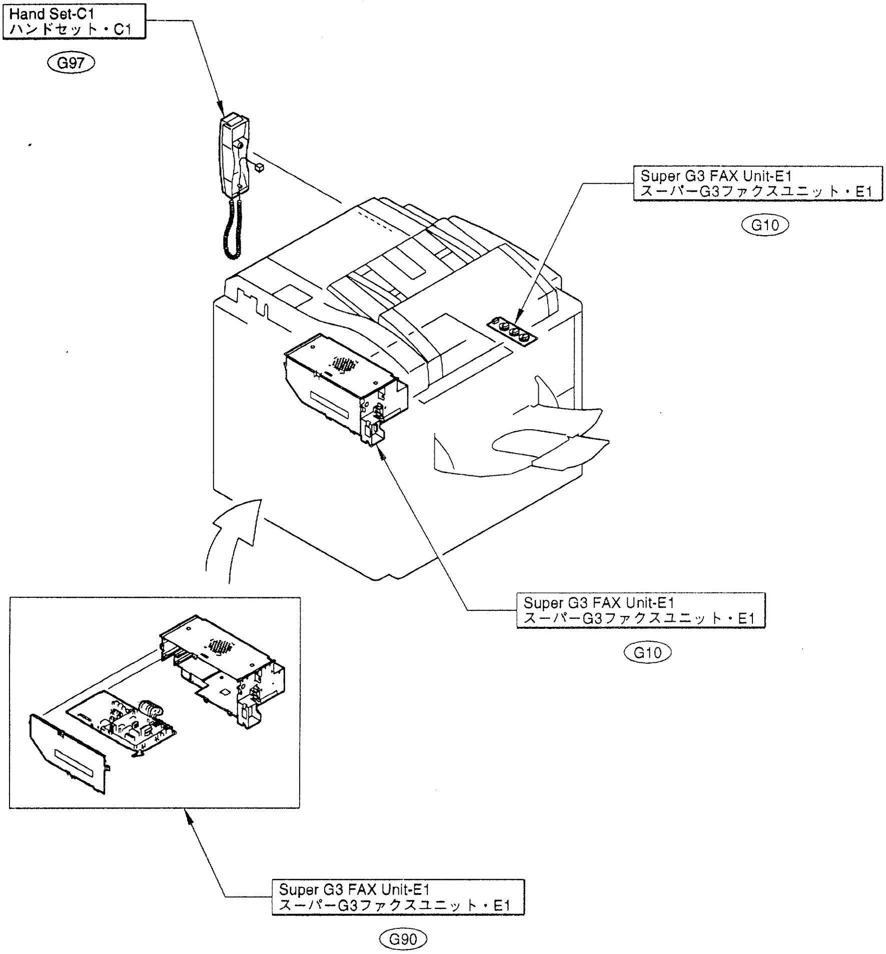

Hand Set-C1
ハンドセット・C1
G97
Super G3 FAX Unit-E1
スーパーG3ファクスユニット・E1
G10
Super G3 FAX Unit-E1
スーパーG3ファクスユニット・E1
G10
Super G3 FAX Unit-E1
スーパーG3ファクスユニット・E1
G90

FIGURE A ASSEMBLY LOCATION DIAGRAM(7/10) 主要部品配置図(7/10)

GP35F (100V)
GP31F (100V)

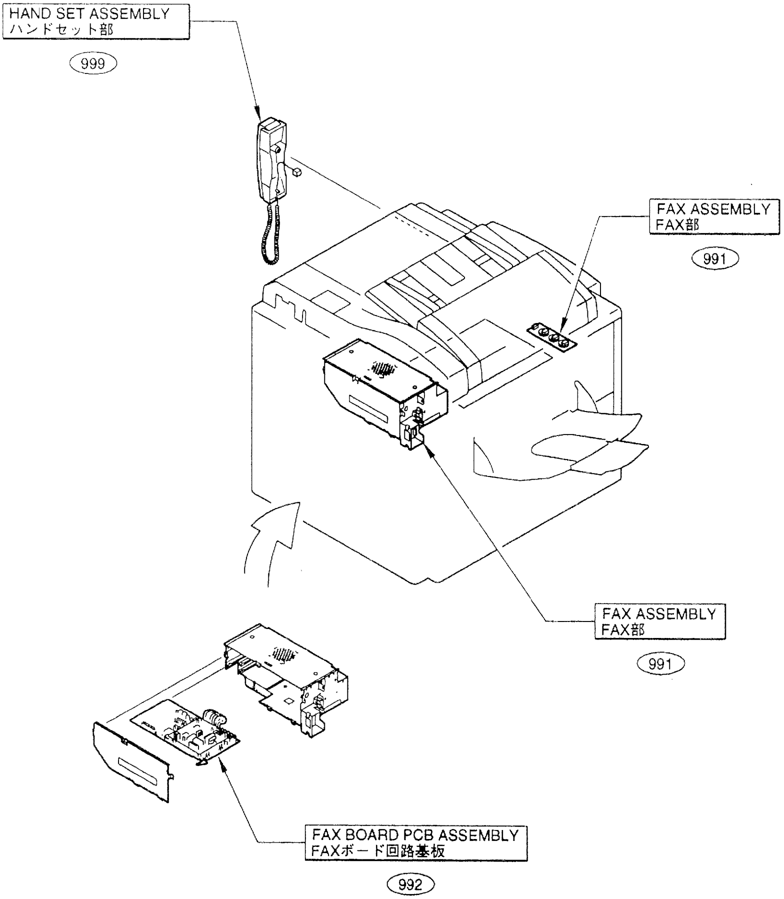

HAND SET ASSEMBLY
ハンドセット部
999
FAX ASSEMBLY
FAX部
991
FAX ASSEMBLY
FAX部
991
FAX BOARD PCB ASSEMBLY
FAXボード回路基板
992

FIGURE A ASSEMBLY LOCATION DIAGRAM(8/10)
主要部品配置図(8/10)

GP35 (100V)
GP31 (100V)

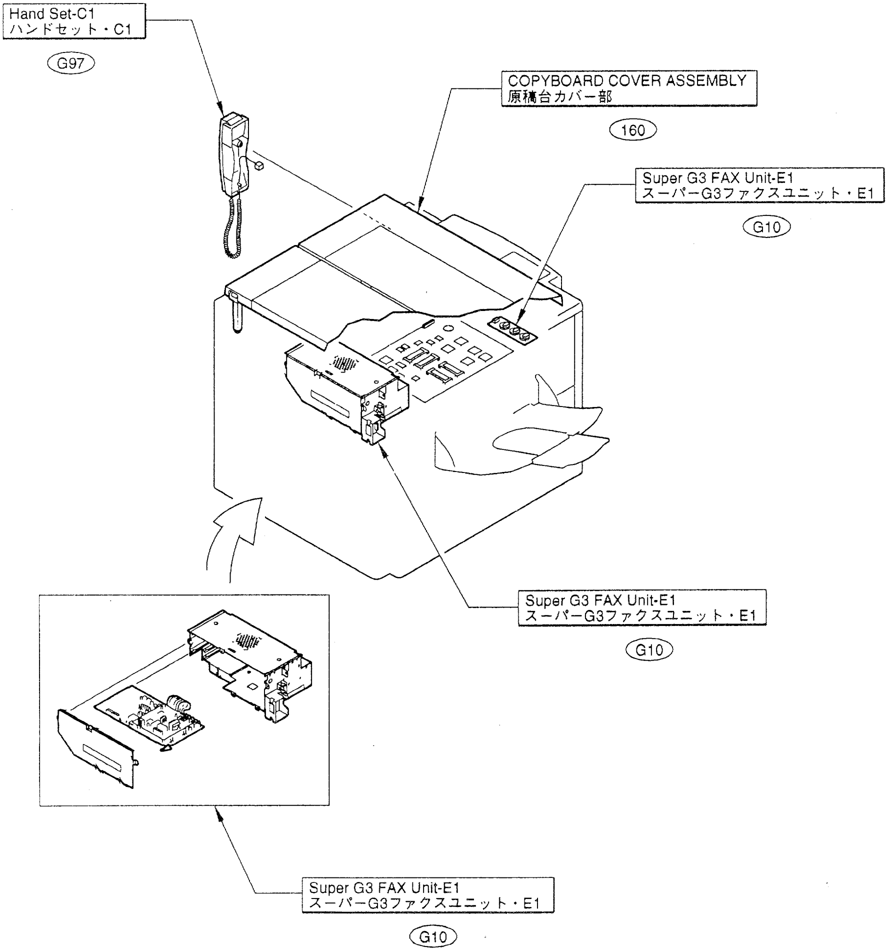

Hand Set-C1
ハンドセット・C1
G97
COPYBOARD COVER ASSEMBLY
原稿台カバー部
160
Super G3 FAX Unit-E1
スーパーG3ファクスユニット・E1
G10
Super G3 FAX Unit-E1
スーパーG3ファクスユニット・E1
G10
Super G3 FAX Unit-E1
スーパーG3ファクスユニット・E1
G10

FIGURE A ASSEMBLY LOCATION DIAGRAM(9/10)
主要部品配置図(9/10)

imageRUNNER 400E (120V)
imageRUNNER 330E (120V)

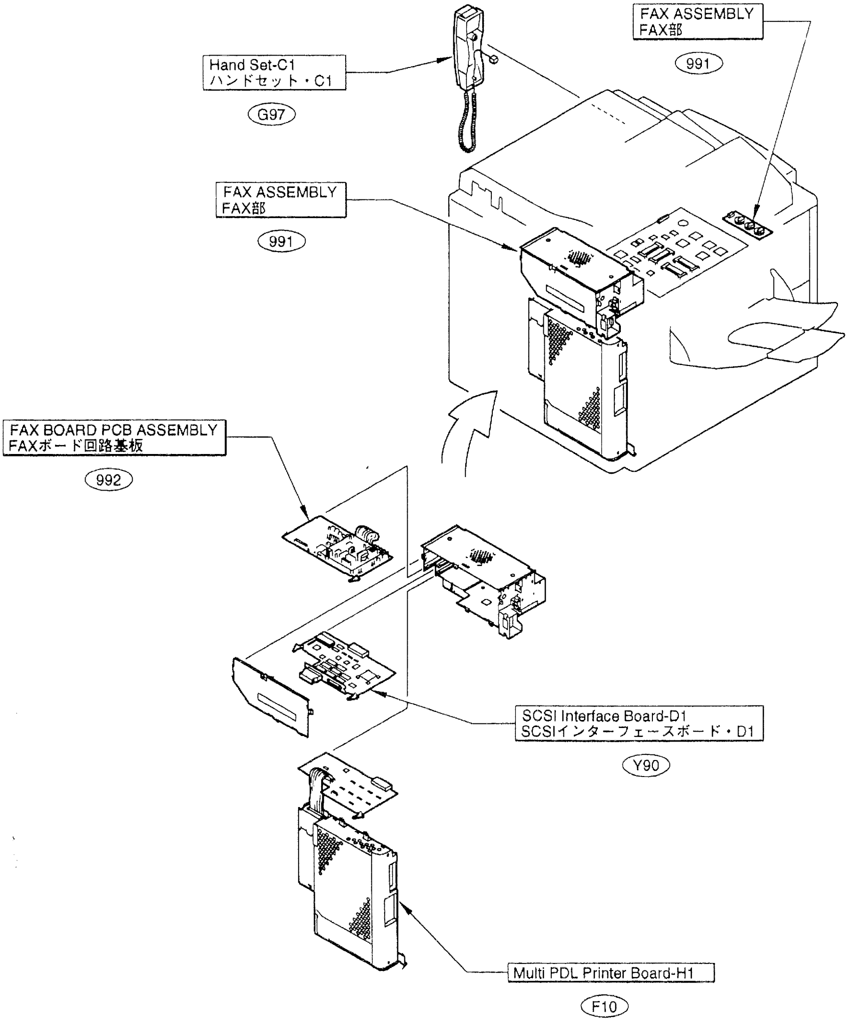

Hand Set-C1
ハンドセット・C1
G97
FAX ASSEMBLY
FAX部
991
FAX ASSEMBLY
FAX部
991
FAX BOARD PCB ASSEMBLY
FAXボード回路基板
992
SCSI Interface Board-D1
SCSIインターフェースボード・D1
Y90
Multi PDL Printer Board-H1
F10

FIGURE A ASSEMBLY LOCATION DIAGRAM(10/10)
主要部品配置図(10/10)

imageRUNNER 400S (120V)
imageRUNNER 330S (120V)

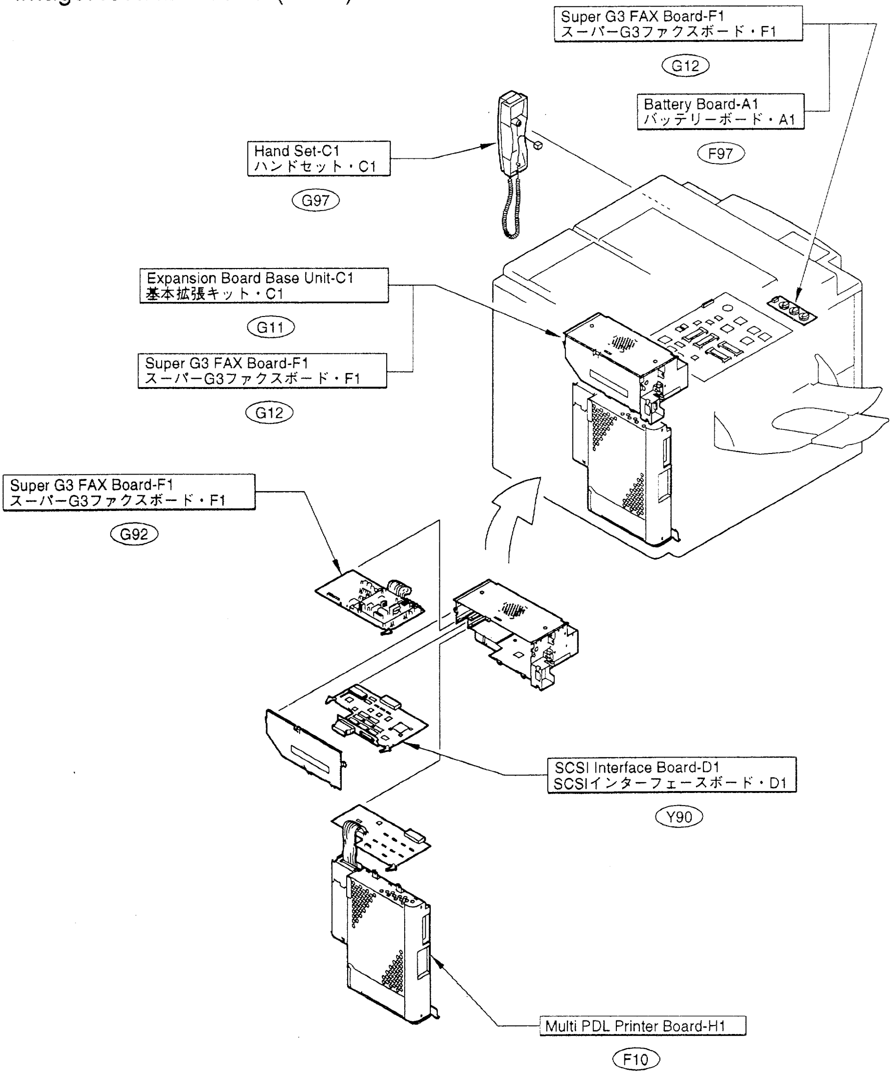

Super G3 FAX Board-F1
スーパーG3ファクスボード・F1
G12
Battery Board-A1
バッテリーボード・A1
F97
Hand Set-C1
ハンドセット・C1
G97
Expansion Board Base Unit-C1
基本拡張キット・C1
G11
Super G3 FAX Board-F1
スーパーG3ファクスボード・F1
G12
Super G3 FAX Board-F1
スーパーG3ファクスボード・F1
G92
SCSI Interface Board-D1
SCSIインターフェースボード・D1
Y90
Multi PDL Printer Board-H1
F10

FIGURE 100 EXTERNAL COVERS, PANELS, ETC.
外装カバー

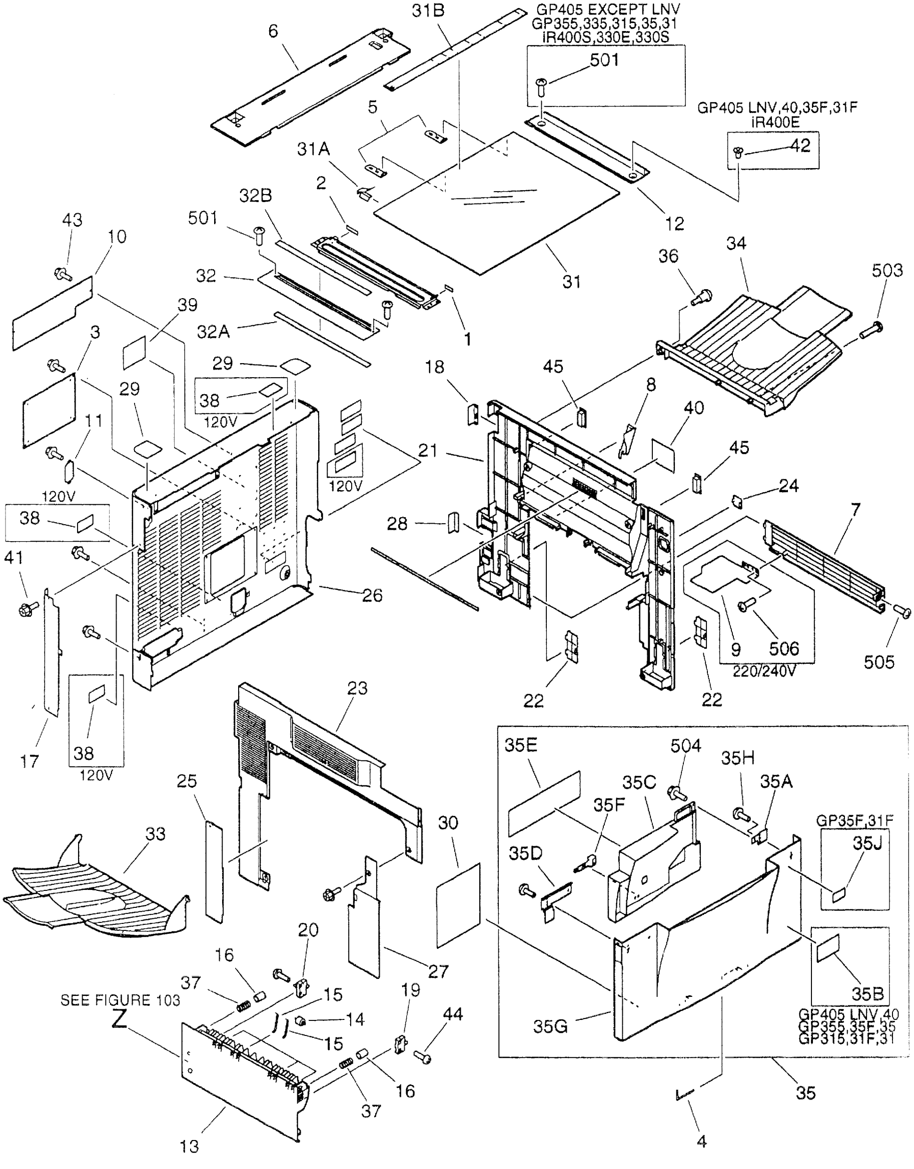

31B
GP405 EXCEPT LNV
GP355,335,315,35,31
iR400S,330E,330S
501
6
GP405 LNV,40,35F,31F
iR400E
42
5
31A
12
2
32B
43
501
10
32
36
34
503
31
39
1
3
32A
29
18
45
38
120V
29
8
40
11
21
45
120V
120V
24
38
28
7
41
26
9
506
505
220/240V
22
22
17
38
120V
23
35E
504
35H
35C
35A
25
35F
GP35F,31F
35J
33
30
35D
20
16
27
37
15
SEE FIGURE 103
Z
14
19
15
44
35B
35G
GP405 LNV,40
GP355,35F,35
GP315,31F,31
16
37
35
13
4

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
100 -	NPN		RF	EXTERNAL COVERS, PANELS, ETC. 外装カバー	
1	FA9 - 3320 - 000		1	SHEET, GLASS PROTECTIVE, 1 ガラス保護シート (1)	
2	FA9 - 3321 - 000		1	SHEET, GLASS PROTECTIVE, 2 ガラス保護シート (2)	
3	FB1 - 7157 - 000		1	COVER カバー	
4	FB3 - 2224 - 000		2	PIN, HINGE ヒンジ　ピン	
5	FB3 - 2241 - 000		2	HOLDER, GLASS ガラス押え	
6	FB3 - 2242 - 000		1	COVER, UPPER, REAR 後上カバー	EXCEPT iR330E,330S
	FB5 - 0419 - 000		1	COVER, UPPER, REAR 後上カバー	iR330E,330S
7	FB3 - 2259 - 000		1	COVER, LOWER, RIGHT 右下カバー	
8	FB3 - 2261 - 000		1	COVER, MULTI FEED CABLE マルチ束線カバー	
9	FB3 - 2381 - 000		1	COVER, PAPER PICK-UP, LOWER 給紙カバー (下)	220/240V
10	FB3 - 2617 - 000		1	PLATE, BLANKING, SYS 目隠し板	
11	FB3 - 2619 - 000		1	PLATE, BLANKING, F 目隠し板 (F)	
12	FB3 - 5756 - 000		1	RETAINER, GLASS, RIGHT ガラス押え (右)	GP405,40,35F,31F iR400E
	FB3 - 8865 - 000		1	RETAINER, GLASS, RIGHT ガラス押え (右)	GP355,335,315,35,31 iR400S,330S
	FF5 - 9144 - 000		1	PLATE, PAPER JUMP, RIGHT ジャンプ台 (右)	iR330E
13	FB4 - 2928 - 000		1	DOOR, LEFT, LOWER 左下扉	
14	FB4 - 2929 - 000		4	ROLLER, REVERSE 反転コロ	
15	FB4 - 2930 - 000		8	SPRING, LEAF 板バネ	
16	FB4 - 2956 - 000		2	SUPPORT, SPRING PRESSURE バネ押さえ	
17	FB4 - 3158 - 000		1	COVER, PRINTER BLANKING プリンタ目隠しカバー	
18	FB4 - 3161 - 000		1	COVER, RDF ADJUSTING RDF調整カバー	
19	FB4 - 3168 - 000		1	LATCH, ROLLER STRIKE ローラ　キャッチ (オス)	
20	FB4 - 3169 - 000		1	LATCH, ROLLER STRIKE ローラ　キャッチ (オス)	
21	FB4 - 3222 - 000		1	COVER, RIGHT 右カバー	
22	FB4 - 3223 - 000		2	COVER, DECK BLANKING デッキ目隠しカバー	
23	FB4 - 3224 - 000		1	COVER, LEFT 左カバー	
24	FB4 - 3225 - 000		1	COVER, HAND SET BLANKING ハンド　セット目隠しカバー	
25	FB4 - 3226 - 000		1	COVER, REAR, LEFT 左後カバー	
26	FB4 - 3231 - 000		1	COVER, REAR 後ろカバー	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
100 - 27	FB4 − 3233 − 000		1	COVER, FRONT, LEFT 左前カバー	
28	FB4 − 3237 − 000		1	COVER, POWER CORD 電源コード カバー	
29	FB4 − 3239 − 000		2	SHEET, REAR COVER, UPPER 後ろカバー シート（上）	
30	FB4 − 3277 − 000		1	LABEL, SERVICE サービス ラベル	
31	FF5 − 6975 − 000		1	GLASS, COPYBOARD 原稿台ガラス	AB SIZE
	FF5 − 6988 − 000		1	GLASS, COPYBOARD 原稿台ガラス	A/INCH SIZE
	FF5 − 6990 − 000		1	GLASS, COPYBOARD 原稿台ガラス	A SIZE
	FF5 − 6992 − 000		1	GLASS, COPYBOARD 原稿台ガラス	AB/INCH SIZE
31 A	FB3 − 9907 − 000		1	PLATE, GROUNDING アース板	
31 B	FB4 − 2773 − 000		1	PLATE, HORIZONTAL SIZE 横サイズ プレート	AB SIZE
	FB4 − 3294 − 000		1	PLATE, HORIZONTAL SIZE 横サイズ プレート	A/INCH SIZE
	FB4 − 3296 − 000		1	PLATE, HORIZONTAL SIZE 横サイズ プレート	A SIZE
	FB4 − 3298 − 000		1	PLATE, HORIZONTAL SIZE 横サイズ プレート	AB/INCH SIZE
32	FF5 − 6976 − 000		1	COVER, JUMP PLATE, LEFT UPPER ジャンプ台カバー（左上）	AB SIZE
	FF5 − 6989 − 000		1	COVER, LEFT UPPER 左上カバー	iR400E,400S,330S A/INCH SIZE
	FF5 − 9486 − 000		1	COVER, JUMP PLATE, LEFT UPPER ジャンプ台カバー（左上）	iR330E A/INCH SIZE
	FF5 − 6991 − 000		1	COVER, LEFT UPPER 左上カバー	A SIZE
	FF5 − 6993 − 000		1	COVER, LEFT UPPER 左上カバー	AB/INCH SIZE
32 A	FB3 − 2793 − 000		1	SHEET, JUMP PLATE ジャンプ台シート	
32 B	FB4 − 2774 − 000		1	PLATE, VERTICAL SIZE 縦サイズ プレート	AB SIZE
	FB4 − 3295 − 000		1	PLATE, VERTICAL SIZE 縦サイズ プレート	A/INCH SIZE
	FB4 − 3297 − 000		1	PLATE, VERTICAL SIZE 縦サイズ プレート	A SIZE
	FB4 − 3299 − 000		1	PLATE, VERTICAL SIZE 縦サイズ プレート	AB/INCH SIZE
33	FG5 − 6276 − 000		1	PAPER DELIVERY TRAY UNIT 排紙トレイ ユニット	
34	FG6 − 2270 − 000		1	RIGHT PAPER DELIVERY TRAY UNIT 右排紙トレイ ユニット	GP405 RNX,40,35F,31F iR400E
35	FG6 − 3869 − 000		1	FRONT COVER UNIT 前カバー ユニット	GP405 LNV
	FG6 − 3886 − 000		1	FRONT COVER UNIT 前カバー ユニット	GP405 TNY
	FG6 − 0551 − 000		1	FRONT COVER UNIT 前カバー ユニット	GP405 EXCEPT LNV,TNY
	FG6 − 3870 − 000		1	FRONT COVER UNIT 前カバー ユニット	GP355
	FG6 − 0557 − 000		1	FRONT COVER UNIT 前カバー ユニット	GP335 EXCEPT TNZ

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
100 - 35	FG6 – 3887 – 000		1	FRONT COVER UNIT 前カバー ユニット	GP335 TNZ
	FG6 – 3872 – 000		1	FRONT COVER UNIT 前カバー ユニット	GP315
	FG6 – 0550 – 000		1	FRONT COVER UNIT 前カバー ユニット	GP40
	FG6 – 0621 – 000		1	FRONT COVER UNIT 前カバー ユニット	GP35F
	FG6 – 0619 – 000		1	FRONT COVER UNIT 前カバー ユニット	GP35
	FG6 – 0622 – 000		1	FRONT COVER UNIT 前カバー ユニット	GP31F
	FG6 – 0620 – 000		1	FRONT COVER UNIT 前カバー ユニット	GP31
	FG6 – 0556 – 000		1	FRONT COVER UNIT 前カバー ユニット	iR400E
	FG6 – 0555 – 000		1	FRONT COVER UNIT 前カバー ユニット	iR400S
	FG6 – 0554 – 000		1	FRONT COVER UNIT 前カバー ユニット	iR330E
	FG6 – 0553 – 000		1	FRONT COVER UNIT 前カバー ユニット	iR330S
35A	FB3 – 2511 – 000		1	PLATE, CATCH キャッチ板	
35B	FB4 – 3136 – 000		1	LABEL, "MEDIO" メディオ ラベル	GP405 LNV GP40
	FB4 – 3138 – 000		1	LABEL, "MEDIO" メディオ ラベル	GP355,35F,35
	FB4 – 3139 – 000		1	LABEL, "MEDIO" メディオ ラベル	GP315,31F,31
35C	FB4 – 3234 – 000		1	CASE, SERVICE サービス ケース	
35D	FB4 – 3235 – 000		1	PLATE, CATCH キャッチ板	
35E	FB4 – 3240 – 000		1	LABEL, "TONER SUPPLY" トナー補給ラベル	
35F	FB4 – 5380 – 000		1	BRUSH, CLEANING クリーナ ブラシ	
35G	FB5 – 0251 – 000		1	COVER, FRONT 前カバー	GP405 LNV
	FB5 – 0251 – 000		1	COVER, FRONT 前カバー	GP405 EXCEPT LNV
	FB5 – 0258 – 000		1	COVER, FRONT 前カバー	GP355
	FB5 – 0256 – 000		1	COVER, FRONT 前カバー	GP335
	FB5 – 0260 – 000		1	COVER, FRONT 前カバー	GP315
	FB4 – 3221 – 000		1	COVER, FRONT 前カバー	GP40
	FB4 – 3247 – 000		1	COVER, FRONT 前カバー	GP35F
	FB4 – 3245 – 000		1	COVER, FRONT 前カバー	GP35
	FB4 – 3248 – 000		1	COVER, FRONT 前カバー	GP31F
	FB4 – 3246 – 000		1	COVER, FRONT 前カバー	GP31
	FB5 – 0255 – 000		1	COVER, FRONT 前カバー	iR400E

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
100 - 35G	FB5 - 0254 - 000		1	COVER, FRONT 前カバー	iR400S
	FB5 - 0253 - 000		1	COVER, FRONT 前カバー	iR330E
	FB5 - 0252 - 000		1	COVER, FRONT 前カバー	iR330S
35H	XA9 - 0605 - 000		3	SCREW,M4X8 タイト ネジ	
35J	FB4 - 6724 - 000		1	LABEL, "SUPER G3" スーパーG3ラベル	GP35F,31F
36	FS1 - 9005 - 000		1	SCREW,STEPPED,M4 段ビス	
37	FS6 - 2813 - 000		2	SPRING, COMPRESSION アッシュク バネ	
38	FS8 - 8194 - 000		3	LABEL, "WARNING CONNECTOR" コネクタ注意ラベル	120V
39	RS5 - 8169 - 000		1	LABEL, "WARNING LASER" レーザ注意ラベル	
40	RS5 - 8169 - 000		1	LABEL, "WARNING LASER" レーザ注意ラベル	
41	XA9 - 0633 - 000		AR	SCREW,RS,M4X8 RS タイト ネジ	
42	XA9 - 0679 - 000		2	SCREW,MACH.,FLAT HEAD,M3X4 平小ネジ	GP405 LNV,40,35F,31F iR400E
43	XA9 - 0732 - 000		11	SCREW,RS,M4X8 RS タイト ネジ	
44	XA9 - 0772 - 000		4	SCREW,P,M3X10 Pタイト ネジ	
45	XZ9 - 0407 - 000		2	LATCH, MAGNET マグネット キャッチ	
501	XB1 - 2300 - 607		8	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
502	XB1 - 2300 - 607		1	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	GP405 EXCEPT LNV GP355,335,315,35,31 iR400S,330E,330S
503	XB1 - 2402 - 509		3	SCREW,MACH.,TRUSS HEAD,M4X25 バインド ネジ	
504	XB3 - 6400 - 800		1	SCREW,RS,M4X8 RS タイト ネジ	
505	XB4 - 7400 - 809		1	SCREW,TAPPING,TRUSS HEAD,M4X8 バインド タッピン ネジ	
506	XB4 - 7400 - 809		2	SCREW,TAPPING,TRUSS HEAD,M4X8 バインド タッピン ネジ	220/240V

FIGURE 101 MACHINE FRONT PLATE
本体前側板

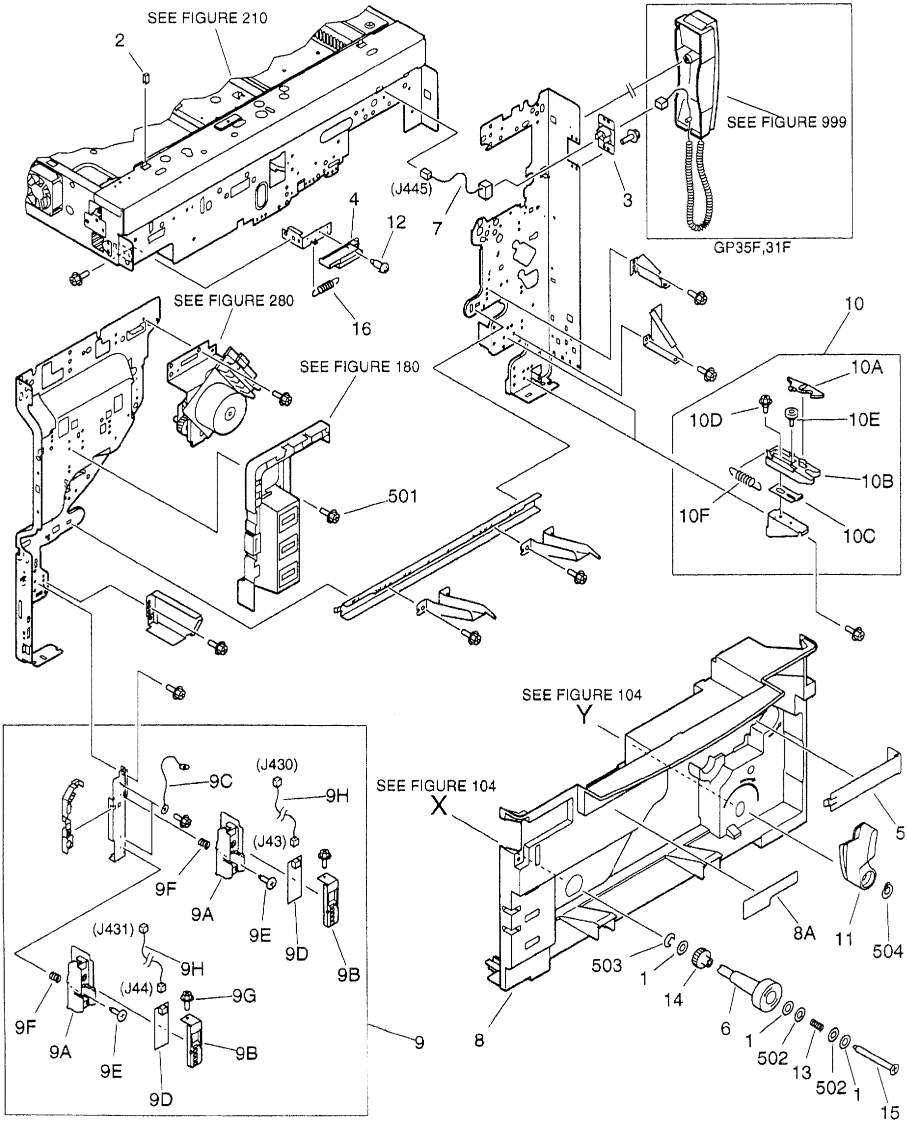
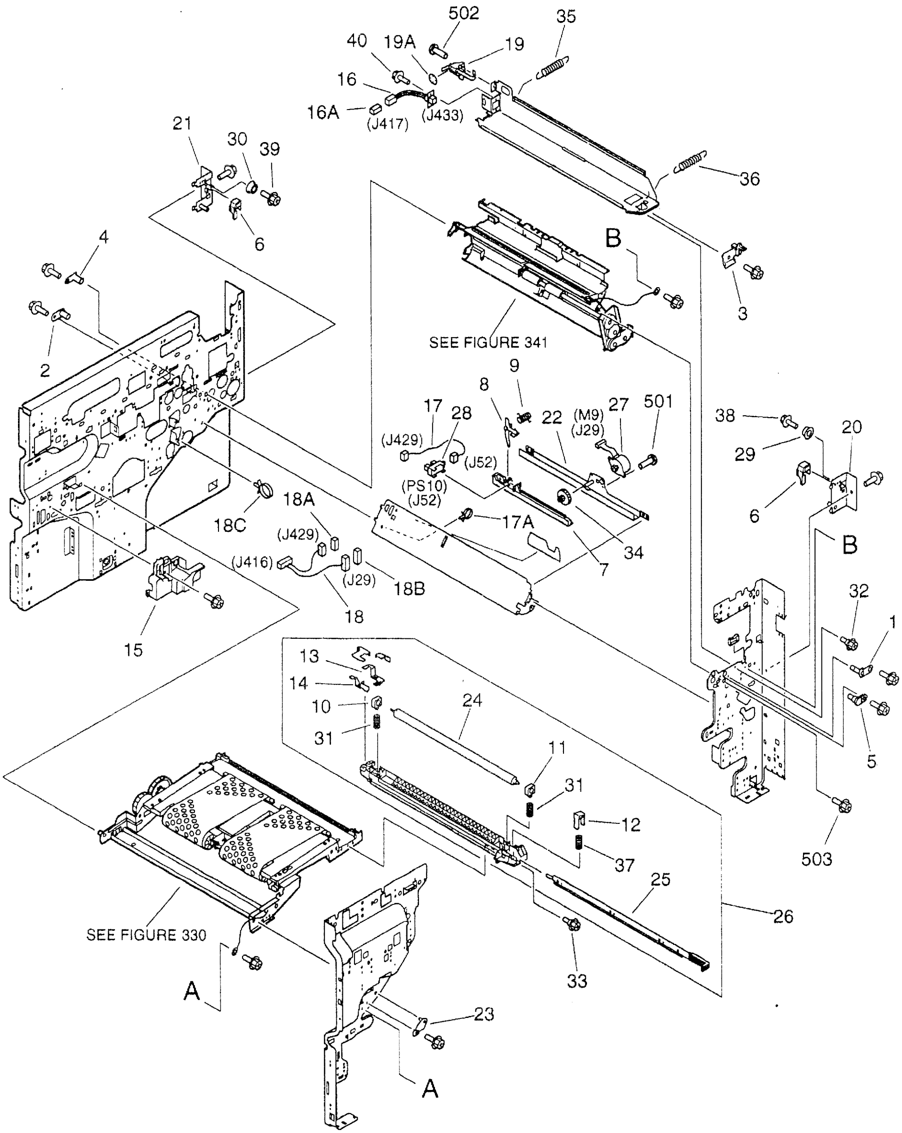

SEE FIGURE 210
2
SEE FIGURE 999
GP35F,31F
(J445)
7
3
4
12
16
SEE FIGURE 280
SEE FIGURE 180
10
10A
10D
10E
10B
10F
10C
501
SEE FIGURE 104
Y
SEE FIGURE 104
X
5
11
504
8A
503
1
14
6
1
502
13
502
1
15
8
(J430)
9C
9H
(J43)
9F
9A
9E
9D
9B
(J431)
9H
(J44)
9G
9F
9A
9E
9B
9D
9

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
101 -	NPN		RF	MACHINE FRONT PLATE 本体前側板	
1	FB1 − 8512 − 000		3	SHIM ナイロン　ワッシャ	
2	FB3 − 0544 − 000		2	SHEET, GLASS PROTECTIVE ガラス保護シート	
3	FB4 − 3036 − 000		1	HOLDER, HAND SET JACK ハンド　セット　ジャック　ホルダ	
4	FB4 − 3092 − 000		1	BLOCK, INTERLOCK SLIDER インターロック　スライダ	
5	FB4 − 3228 − 000		1	COVER, DOWN LOAD ダウン　ロード　カバー	
6	FB4 − 3262 − 000		1	KNOB, FIXING 定着ツマミ	
7	FF3 − 2890 − 000		1	CABLE, HAND SET ハンド　セット束線	J445
8	FF5 − 6994 − 000		1	COVER, INTERNAL 内カバー	
8 A	FB5 − 0281 − 000		1	LABEL, "CAUTION LASER" レーザ注意ラベル	
9	FG5 − 6244 − 000		1	SIZE SENSOR SWITCH UNIT サイズ検スイッチ　ユニット	
9 A	FB3 − 2947 − 000		2	HOLDER, PCB 基板ホルダ	
9 B	FB3 − 2948 − 000		2	COVER, SIZE SENSOR PCB 基板カバー	
9 C	FF3 − 1171 − 000		2	CABLE, GROUNDING アース束線	
9 D	FG5 − 6288 − 000		2	CASSETTE SIZE SENSOR PCB UNIT カセット　サイズ検知回路基板	
9 E	FS5 − 9397 − 000		2	PIN, PLATE HOLDER ホルダ　ピン	
9 F	FS6 − 2311 − 000		2	SPRING, COMPRESSION アッシュク　バネ	
9 G	XA9 − 0626 − 000		4	SCREW,RS,M3X6 RS　タイト　ネジ	
9 H	FF3 − 1170 − 000		2	CABLE, C. SIZE SENSOR PCB カセット　サイズ検知基板束線	J43,44,430,431
10	FG5 − 6246 − 000		2	CASSETTE CLICK UNIT カセット　クリック　ユニット	
10 A	FB3 − 2936 − 000		2	LEVER, CLICK クリック　レバー	
10 B	FB3 − 2937 − 000		2	BLOCK, CASSETTE STOP カセット決め板	
10 C	FB3 − 2939 − 000		2	PLATE, SIDE REGISTRATION 横レジ板	
10 D	FS5 − 9164 − 000		2	SCREW,RS STEPPED,M4 RS　タイト　段ビス	
10 E	FS5 − 9398 − 000		2	SCREW, SIDE REGIST., M3X8 横レジ　ビス	
10 F	FS6 − 2310 − 000		2	SPRING, TENSION ヒッパリ　バネ	
11	FG6 − 0561 − 000		1	FEEDER ENGAGEMENT HANDLE UNIT 搬送加圧把手	
12	FS1 − 9051 − 000		2	SCREW,STEPPED,M3 段ビス	
13	FS2 − 2784 − 000		1	SPRING, COMPRESSION アッシュク　バネ	
14	FS3 − 0809 − 000		1	GEAR, 24T 24T　ギア	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
101 - 15	FS5 − 9142 − 000		1	SCREW,STEPPED,M4 段ビス	
16	FS6 − 2786 − 000		1	SPRING, TENSION ヒッパリ バネ	
501	XB3 − 6400 − 800		AR	SCREW,RS,M4X8 RS タイト ネジ	
502	XD1 − 1106 − 235		2	SHIM ヒョウジュン ワッシャ	
503	XD2 − 1100 − 502		1	RING,E E リング	
504	XD2 − 2100 − 802		1	RING,GRIP グリップ リング	

FIGURE 102 INTERNAL COMPONENTS 1
本体機械内部（1）


502
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19A
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16
16A
(J417)
(J433)
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30
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36
4
6
B
3
2
SEE FIGURE 341
9
8
17
28
22
(M9)
(J29)
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501
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20
29
(J429)
(J52)
(PS10)
(J52)
6
18C
18A
17A
B
(J429)
34
(J416)
(J29)
18B
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15
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31
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37
503
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SEE FIGURE 330
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A
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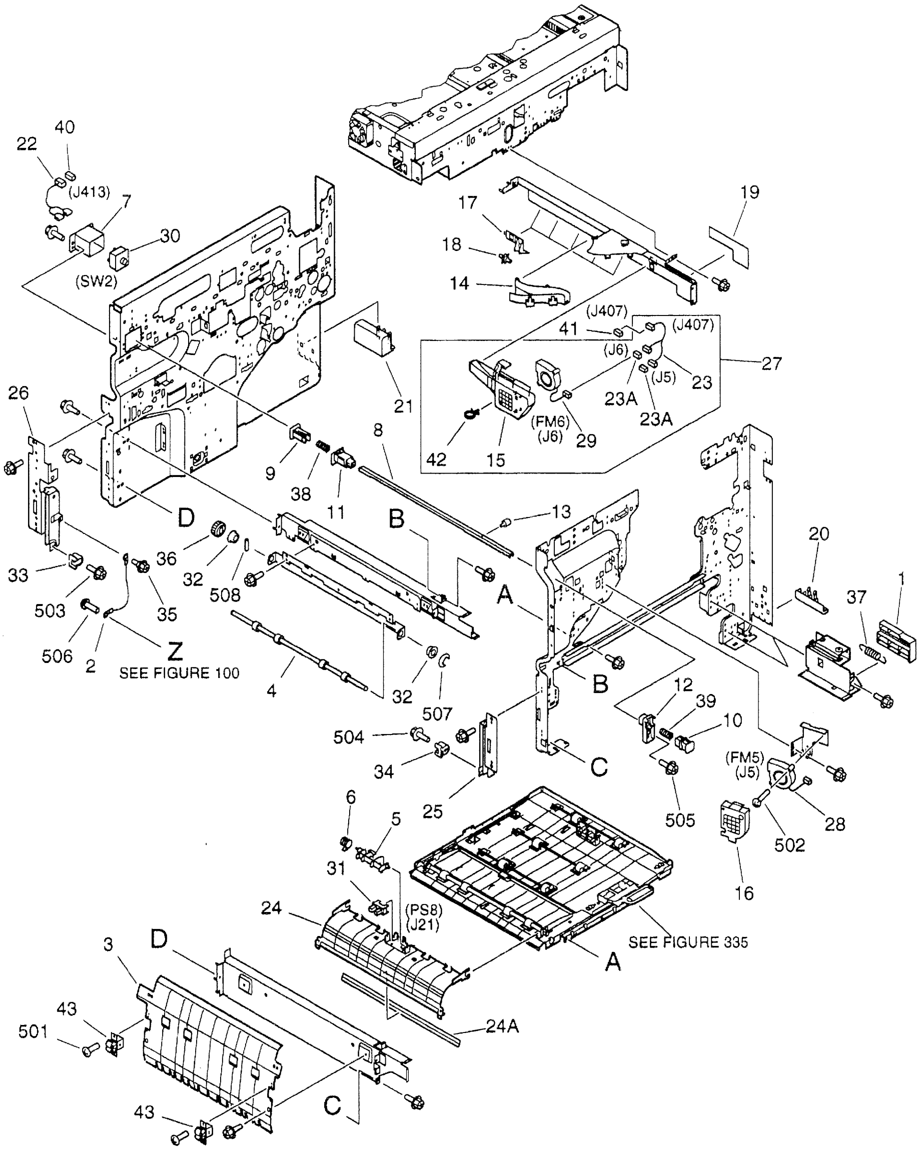
A

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
102 -	NPN		RF	INTERNAL COMPONENTS 1 本体機械内部（1）	
1	FA1 – 9546 – 000		1	PIN, POSITIONING 位置決めピン	
2	FA4 – 1149 – 000		1	PIN, PLATE 絶縁ピン	
3	FB3 – 2206 – 000		1	PLATE, STOP DEVELOPING 現像ストッパ	
4	FB3 – 2214 – 000		2	PIN, POSITIONING 位置決めピン	
5	FB3 – 2343 – 000		1	PIN, FLOAT フロート　ピン	
6	FB3 – 2829 – 000		2	BLOCK, MULTI FEED TRAY, STOP マルチ　トレイ　ストッパ	
7	FB3 – 2994 – 000		1	BLOCK, SLIDE スライド　ブロック	
8	FB3 – 2995 – 000		1	LINK, SIDE REGISTRATION 横レジスト　リンク	
9	FB3 – 2996 – 000		1	SPRING, TORSION ネジリ　バネ	
10	FB3 – 3081 – 000		1	BUSHING, TRANS. ROLLER, REAR 転写軸ブッシング（後）	
11	FB3 – 3086 – 000		1	BUSHING, TRANS. ROLLER, FRONT 転写軸ブッシング（前）	
12	FB4 – 2833 – 000		1	BLOCK, GUIDE PRESSURE ガイド加圧コマ	
13	FB4 – 2837 – 000		1	PLATE, TRANSFER CONNECTING 転写接点板	
14	FB4 – 2838 – 000		1	PLATE, ELIMINATOR CONNECTING 除電接点板	
15	FB4 – 3230 – 000		1	COVER, CONNECTOR コネクタ　カバー	
16	FF3 – 1136 – 000		1	CABLE, TONER SENSOR トナー　センサ中継束線	J417,433
16A	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J417
17	FF3 – 1176 – 000		1	CABLE, SIDE REGISTRATION 横レジスト束線	J52,429
17A	WT2 – 5041 – 000		1	CLAMP, CABLE ケーブル　クランプ	
18	FF3 – 2978 – 000		1	CABLE, SIDE REGISTRATION 横レジスト中継束線	J29,416,429
18A	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J429
18B	VS1 – 5057 – 006		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J29
18C	WT2 – 5041 – 000		3	CLAMP, CABLE ケーブル　クランプ	
19	FF5 – 1458 – 020		1	MOUNT, ELECTRODE 電極台	
19A	XA9 – 0134 – 000		2	NUT, PUSH プッシュ　ナット	
20	FF5 – 4486 – 000		1	SUPPORT, LATCH SHAFT, FRONT フック軸支板（前）	
21	FF5 – 4487 – 020		1	SUPPORT, LATCH SHAFT, REAR フック軸支板（後）	
22	FF5 – 4506 – 000		1	BRACKET, SIDE REGIST. MOTOR 横レジスト　モータ取り付台	
23	FF5 – 4544 – 000		1	PLATE, THRUST STOP スラスト止め板	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
102 - 24	FF5 – 6980 – 000		1	ROLLER, TRANSFER 転写ローラ	
25	FF5 – 7246 – 000		1	ELIMINATOR, STATIC CHARGE 除電針	
26	FG6 – 0456 – 000		1	TRANSFER ROLLER UNIT 転写ローラ　ユニット	
27	FH6 – 1253 – 000		1	MOTOR, STEPPING ステッピング　モータ	M9 J29
28	FH7 – 7312 – 000		1	PHOTO-INTERRUPTER フォトインタラプタ	PS10 J52
29	FS5 – 1589 – 000		1	BUSHING ブッシング	
30	FS5 – 1589 – 000		1	BUSHING ブッシング	
31	FS5 – 2645 – 000		2	SPRING, COMPRESSION アッシュク　バネ	
32	FS5 – 9164 – 000		1	SCREW,RS STEPPED,M4 RS　タイト　段ビス	
33	FS5 – 9214 – 000		1	SCREW,RS STEPPED,M4 RS　タイト　段ビス	
34	FS6 – 0557 – 000		1	GEAR, 12T/36T 12T／36T　ギア	
35	FS6 – 2305 – 000		1	SPRING, TENSION ヒッパリ　バネ	
36	FS6 – 2306 – 000		1	SPRING, TENSION ヒッパリ　バネ	
37	FS6 – 2789 – 000		1	SPRING, COMPRESSION アッシュク　バネ	
38	XA9 – 0724 – 000		1	SCREW,RS,M3X8 RS　タイト　ネジ	
39	XA9 – 0724 – 000		1	SCREW,RS,M3X8 RS　タイト　ネジ	
40	XA9 – 0724 – 000		2	SCREW,RS,M3X8 RS　タイト　ネジ	
501	XB1 – 2300 – 609		2	SCREW,MACH.,TRUSS HEAD,M3X6 バインド　ネジ	
502	XB1 – 2300 – 609		1	SCREW,MACH.,TRUSS HEAD,M3X6 バインド　ネジ	
503	XB3 – 6400 – 800		AR	SCREW,RS,M4X8 RS　タイト　ネジ	

FIGURE 103 INTERNAL COMPONENTS 2
本体機械内部（2）

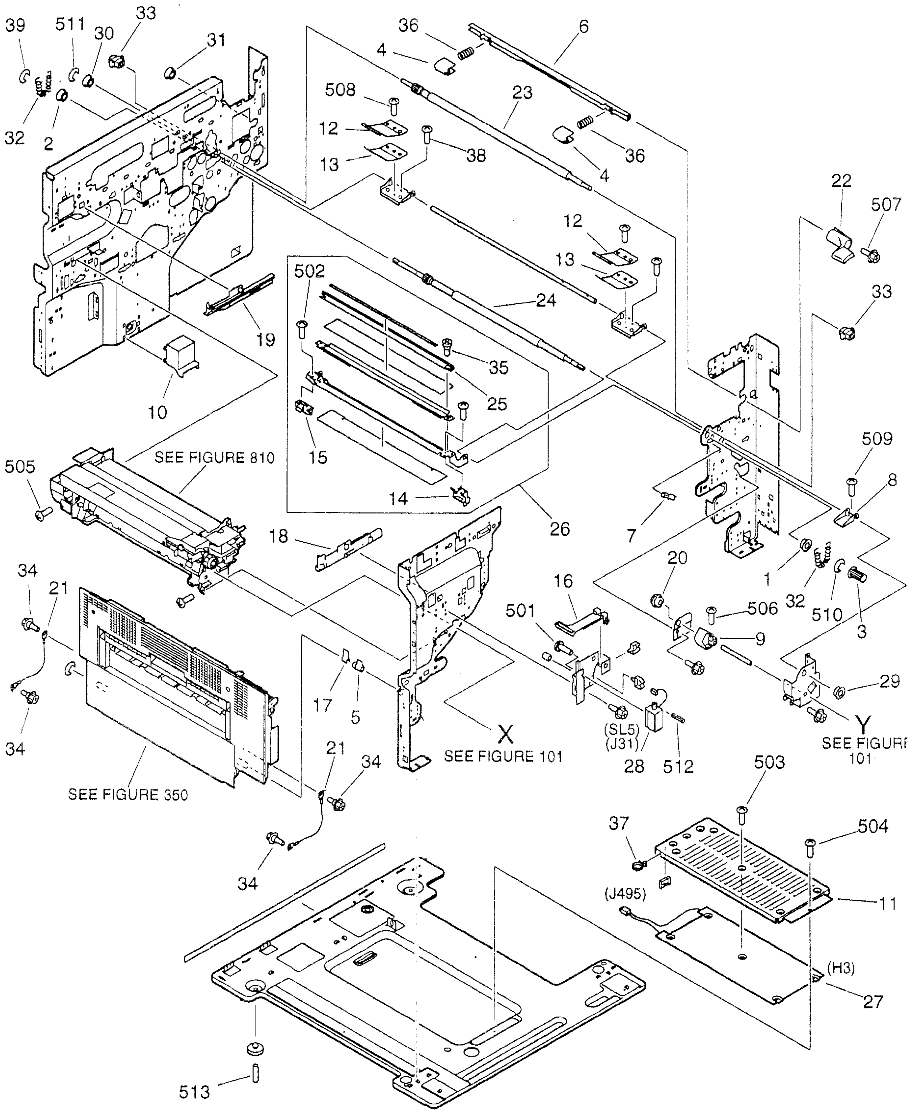


40
22
(J413)
7
30
(SW2)
17
18
14
19
(J407)
41
(J407)
(J6)
(J5)
23
27
23A
23A
(FM6)
(J6)
29
42
15
21
26
8
9
38
11
D
B
13
36
32
508
33
503
35
506
2
Z
SEE FIGURE 100
A
4
32
507
20
37
1
B
12
39
10
504
34
25
C
(FM5)
(J5)
28
502
505
16
6
5
31
24
(PS8)
(J21)
SEE FIGURE 335
A
3
D
43
501
24A
43
C

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
103 -	NPN		RF	INTERNAL COMPONENTS 2 本体機械内部（2）	
1	FB3 – 2212 – 020		2	COVER, RIGHT RAIL 右レール カバー	
2	FB3 – 5597 – 000		1	WIRE, DOOR SUPPORT ドア支持ワイヤ	
3	FB4 – 2926 – 000		1	PLATE, REVERSE GUIDE 反転ガイド板	
4	FB4 – 2927 – 000		1	ROLLER, REVERSE 反転ローラ	
5	FB4 – 2934 – 000		1	FLAG, DUPLEXING P. FEED SENSOR 両面搬送センサ フラッグ	
6	FB4 – 2935 – 000		1	SPRING, TORSION ネジリ バネ	
7	FB4 – 3061 – 000		1	MOUNT, DOOR SWITCH ドア スイッチ取付台	
8	FB4 – 3062 – 000		1	SHAFT, DOOR SWITCH ドア スイッチ軸	
9	FB4 – 3063 – 000		1	BLOCK, SWITCH PRESSURE スイッチ加圧ブロック	
10	FB4 – 3064 – 000		1	BLOCK, SHAFT PRESSURE 軸加圧ブロック	
11	FB4 – 3065 – 000		1	HOLDER, DOOR SWITCH, REAR ドア スイッチ受け（後）	
12	FB4 – 3066 – 000		1	HOLDER, DOOR SWITCH, FRONT ドア スイッチ受け（前）	
13	FB4 – 3068 – 000		1	SHAFT, LIMITTER リミッタ軸	
14	FB4 – 3132 – 000		1	DUCT, POLYGON ポリゴン ダクト	
15	FB4 – 3133 – 000		1	COVER, LOWER FRONT FAN 前下ファン カバー	
16	FB4 – 3134 – 000		1	COVER, UPPER FRONT FAN 前上ファン カバー	
17	FB4 – 3191 – 000		5	SUPPORT, ROWEL 拍車台	
18	FB4 – 3192 – 000		5	ROWEL 拍車	
19	FB4 – 3193 – 000		1	LABEL, CAUTION 注意ラベル	
20	FB4 – 3249 – 000		1	HANDLE, RIGHT, FRONT 把手（右前）	
21	FB4 – 3250 – 000		1	HANDLE, RIGHT, REAR 把手（右後）	
22	FF3 – 2980 – 000		1	CABLE, DOOR SWITCH CONNECTING ドア スイッチ中継束線	J413
23	FF3 – 3015 – 000		1	CABLE, LOWER FRONT FAN 前下ファン束線	J5,6,407
23A	VS1 – 5057 – 003		2	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J5,6
24	FF5 – 6955 – 000		1	GUIDE, PAPER FEED, UPPER, 1 搬送上ガイド（1）	
24A	FB4 – 2948 – 000		1	SHEET, REVERSE 反転シート	
25	FF5 – 6956 – 000		1	HANDLE, CARRING, FRONT 把手（前）	
26	FF5 – 6957 – 000		1	HANDLE, CARRING, REAR 把手（後）	
27	FG6 – 0597 – 000		1	CARTRIDGE RAIL FAN UNIT カートリッジ レール ファン ユニット	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
103 - 28	FH6 — 1488 — 000		1	FAN, COOLING 冷却ファン	FM5 J5
29	FH6 — 1488 — 000		1	FAN, COOLING 冷却ファン	FM6 J6
30	FH7 — 6229 — 000		1	SWITCH, DOOR ドア　スイッチ	SW2
31	FH7 — 7394 — 000		1	PHOTO-INTERRUPTER フォトインタラプタ	PS8 J21
32	FS1 — 1341 — 000		2	BUSHING ブッシング	
33	FS5 — 1589 — 000		1	BUSHING ブッシング	
34	FS5 — 1589 — 000		1	BUSHING ブッシング	
35	FS5 — 9164 — 000		1	SCREW,RS STEPPED,M4 RS　タイト　段ビス	
36	FS6 — 0081 — 000		1	GEAR, 20T 20T　ギア	
37	FS6 — 2309 — 000		2	SPRING, TENSION ヒッパリ　バネ	
38	FS6 — 2784 — 000		1	SPRING, COMPRESSION アッシュク　バネ	
39	FS6 — 2785 — 000		1	SPRING, COMPRESSION アッシュク　バネ	
40	VS1 — 5057 — 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J413
41	VS1 — 5057 — 006		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J407
42	WT2 — 5178 — 000		1	CLIP, CABLE ロッキング　ワイヤ　サドル	
43	XZ9 — 0462 — 000		2	LATCH, ROLLER CATCH ローラ　キャッチ（メス）	
501	XB1 — 2300 — 407		4	SCREW,MACH.,TRUSS HEAD,M3X4 バインド　ネジ	
502	XB1 — 2402 — 009		2	SCREW,MACH.,TRUSS HEAD,M4X20 バインド　ネジ	
503	XB3 — 6300 — 609		1	SCREW,RS,M3X6 RS　タイト　ネジ	
504	XB3 — 6300 — 609		1	SCREW,RS,M3X6 RS　タイト　ネジ	
505	XB3 — 6400 — 800		AR	SCREW,RS,M4X8 RS　タイト　ネジ	
506	XB4 — 7400 — 809		1	SCREW,TAPPING,TRUSS HEAD,M4X8 バインド　タッピン　ネジ	
507	XD2 — 1100 — 642		2	RING,E E　リング	
508	XD3 — 2200 — 122		1	PIN,DOWEL ヘイコウ　ピン	

FIGURE 104 INTERNAL COMPONENTS 3
本体機械内部（3）


39
511
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502
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SEE FIGURE 810
509
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14
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510
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21
16
506
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501
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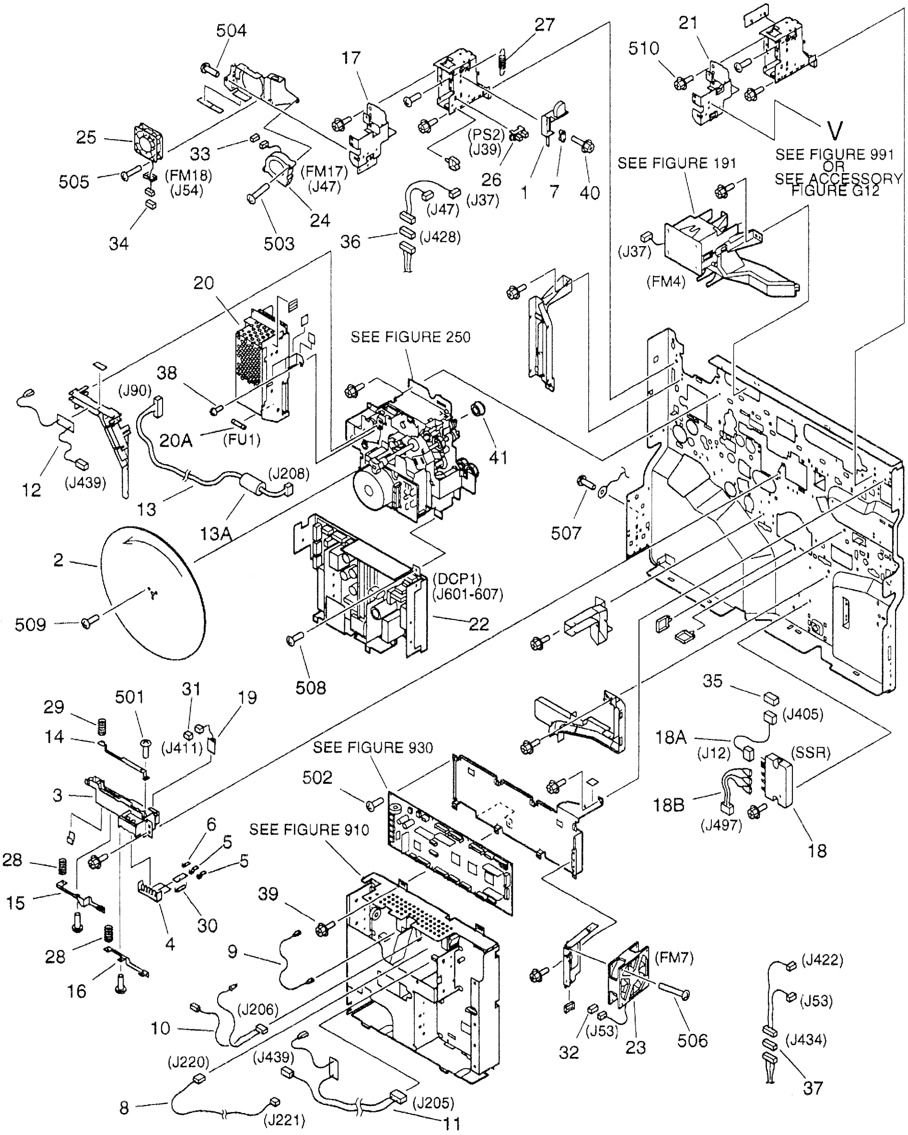
29
17
5
X
SEE FIGURE 101
(SL5)
(J31)
28
512
Y
SEE FIGURE 101
34
21
34
503
SEE FIGURE 350
37
504
34
(J495)
11
(H3)
27
513

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
104 -	NPN		RF	INTERNAL COMPONENTS 3 本体機械内部 (3)	
1	FA1 − 0056 − 000		1	BUSHING ブッシング	
2	FA1 − 0056 − 000		1	BUSHING ブッシング	
3	FB1 − 7214 − 000		1	KNOB レジスト ツマミ	
4	FB2 − 3900 − 000		2	CAM, DEVELOPING PRESSURE 現像加圧カム	
5	FB3 − 2216 − 000		1	BUSHING ブッシング	
6	FB3 − 2667 − 000		1	SHAFT, PRESSURE 加圧軸	
7	FB3 − 2782 − 000		1	BLOCK, TRANSFER GUIDE SUPPORT 転写ガイド サポート ブロック	
8	FB3 − 3031 − 000		1	LEVER, PAPER FEED PRESSURE 搬送加圧レバー	
9	FB3 − 3033 − 000		1	CAM, PRESSURE 加圧カム	
10	FB3 − 3192 − 030		1	COVER, HEATER CONNECTOR ヒータ コネクタ カバー	
11	FB3 − 7192 − 000		1	COVER, CASSETTE HEATER カセット ヒータ カバー	
12	FB4 − 2842 − 000		2	SPRING, LEAF 板バネ	
13	FB4 − 2843 − 000		2	SPRING, LEAF 板バネ	
14	FB4 − 2847 − 000		1	BLOCK, PUSH-ON, FRONT 突当てブロック (前)	
15	FB4 − 2848 − 000		1	BLOCK, PUSH-ON, REAR 突当てブロック (後)	
16	FB4 − 3072 − 000		1	ARM, SOLENOID ソレノイド アーム	
17	FB4 − 3107 − 000		1	BUSHING, DELIVERY SHAFT 排紙軸ブッシング	
18	FB4 − 3253 − 000		1	RAIL, FIXING GUIDE, FRONT 定着ガイド レール (前)	
19	FB4 − 3254 − 000		1	RAIL, FIXING GUIDE, REAR 定着ガイド レール (後)	
20	FB4 − 3275 − 000		1	COLLAR, FIXING 固定カラー	
21	FB4 − 3307 − 000		2	WIRE, DELIVERY SUPPORT 排紙支持ワイヤ	
22	FB4 − 5382 − 000		1	HANDLE, DEVELOPING PRESSURE 現像加圧把手	
23	FF5 − 4476 − 000		1	ROLLER, REGISTRATION, UPPER レジスト ローラ (上)	
24	FF5 − 4477 − 000		1	ROLLER, REGISTRATION, LOWER レジスト ローラ (下)	
25	FF5 − 7003 − 000		1	PLATE, MAGNET マグネット板	
26	FG6 − 0453 − 030		1	TRANSFER GUIDE UNIT 転写ガイド ユニット	
27	FH7 − 4576 − 000		1	HEATER, CASSETTE カセット ヒータ	H3 J495
28	FH7 − 5775 − 000		1	SOLENOID ソレノイド	SL5 J31
29	FS1 − 1189 − 000		1	BUSHING ブッシング	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
104 - 30	FS1 – 1189 – 000		1	BUSHING ブッシング	
31	FS2 – 1431 – 000		1	BUSHING ブッシング	
32	FS2 – 2783 – 000		2	SPRING, TENSION ヒッパリ バネ	
33	FS5 – 1261 – 000		2	BUSHING, REGISTRATION, UPPER レジスト軸受け（上）	
34	FS5 – 9214 – 000		4	SCREW,RS STEPPED,M4 RS タイト 段ビス	
35	FS5 – 9606 – 000		2	SCREW,STEPPED,M3 段ビス	
36	FS6 – 2317 – 000		2	SPRING, COMPRESSION アッシュク バネ	
37	WT2 – 5041 – 000		1	CLAMP, CABLE ケーブル クランプ	
38	XA9 – 0700 – 000		2	SCREW,TP,M4X8 TP ネジ	
39	XD9 – 0137 – 000		1	RING,E E リング	
501	XB1 – 2300 – 409		2	SCREW,MACH.,TRUSS HEAD,M3X4 バインド ネジ	
502	XB1 – 2301 – 009		2	SCREW,MACH.,TRUSS HEAD,M3X10 バインド ネジ	
503	XB1 – 2400 – 409		5	SCREW,MACH.,TRUSS HEAD,M4X4 バインド ネジ	
504	XB1 – 2400 – 606		1	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
505	XB1 – 2400 – 607		2	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
506	XB1 – 2401 – 609		1	SCREW,MACH.,TRUSS HEAD,M4X16 バインド ネジ	
507	XB3 – 6400 – 800		AR	SCREW,RS,M4X8 RS タイト ネジ	
508	XB6 – 7400 – 605		2	SCREW,TP,M4X6 TP ネジ	
509	XB6 – 7501 – 209		1	SCREW,TP,M5X12 TP ネジ	
510	XD2 – 1100 – 642		4	RING,E E リング	
511	XD2 – 1100 – 642		1	RING,E E リング	
512	XD3 – 1300 – 122		1	PIN,SPRING スプリング ピン	
513	XD3 – 2300 – 122		1	PIN,DOWEL ヘイコウ ピン	

FIGURE 105 MACHINE REAR PLATE 1
本体後側板（1）



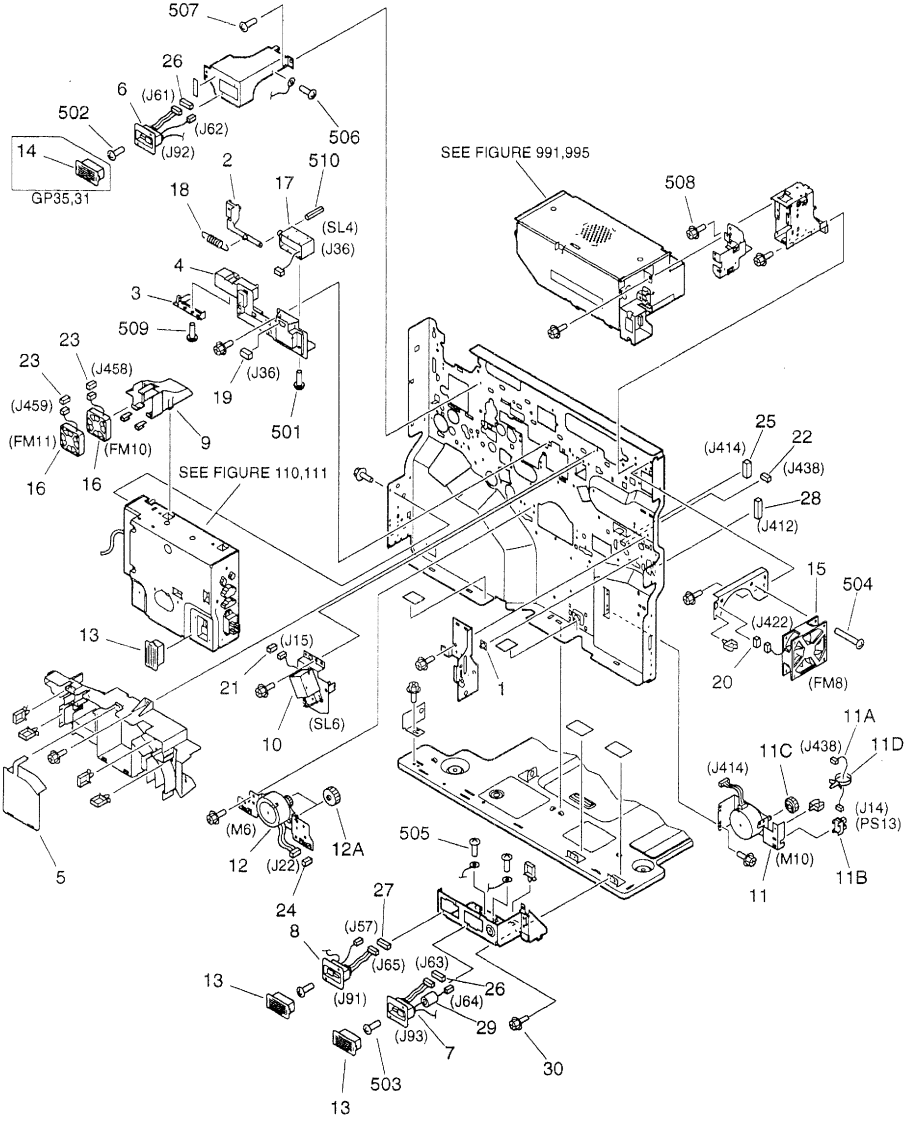
504
27
17
21
510
25
33
505
(FM18)
(J54)
34
(FM17)
(J47)
503
24
(PS2)
(J39)
26
1
7
40
(J47)
(J37)
36
(J428)
V
SEE FIGURE 191
SEE FIGURE 991
OR
SEE ACCESSORY
FIGURE G12
(J37)
(FM4)
20
SEE FIGURE 250
38
(J90)
20A
(FU1)
41
12
(J439)
(J208)
13
13A
507
2
(DCP1)
(J601-607)
22
509
508
35
(J405)
29
501
31
19
(J411)
14
SEE FIGURE 930
18A
(J12)
(SSR)
3
502
18B
(J497)
18
6
5
5
28
SEE FIGURE 910
15
39
4
30
28
9
(FM7)
16
(J206)
(J422)
(J53)
10
(J53)
32
23
506
(J434)
(J220)
(J439)
37
8
(J205)
(J221)
11

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
105 -	NPN		RF	MACHINE REAR PLATE 1 本体後側板 (1)	
1	FB1 − 6668 − 000		1	LEVER, SENSING 検知レバー	
2	FB3 − 2209 − 000		1	FLYWHEEL フライホイール	
3	FB3 − 2592 − 000		1	BLOCK, TRANSFER CONNECTING 転写コネクタ　ブロック	
4	FB3 − 2596 − 000		1	SUPPORT, CORD コード押え	
5	FB3 − 2644 − 000		2	PLATE, TERMINAL, 1 電極板 (1)	
6	FB3 − 2645 − 000		1	PLATE, TERMINAL, 2 電極板 (2)	
7	FB3 − 2791 − 000		1	ROLLER, SENSOR MOUNT 検知台コロ	
8	FF3 − 2988 − 000		1	CABLE, FIXING BIAS CONNECTING 定着バイアス中継束線	J220,221
9	FF3 − 2989 − 000		1	OUTPUT CABLE, TRANSFER 転写出力束線	
10	FF3 − 2990 − 000		1	CABLE, STATIC EL./TRANS. GUIDE 除電／転写ガイド束線	J206
11	FF3 − 2991 − 000		1	CABLE, PRIMARY BIAS 一次バイアス束線	J205,439
12	FF3 − 2992 − 000		1	CABLE, DEVELOPMENT BIAS 現像バイアス束線	J439
13	FF3 − 2993 − 000		1	CABLE, FLUORESCENT LAMP 蛍光灯束線	J90,208
13A	WE8 − 5120 − 000		1	CORE, FERRITE フェライト　コア	
14	FF5 − 4499 − 000		1	PLATE, TERMINAL, TG 電極	
15	FF5 − 4500 − 000		1	PLATE, TERMINAL, T 電極	
16	FF5 − 4501 − 000		1	PLATE, TERMINAL, S 電極	
17	FF5 − 6974 − 000		1	PLATE, RDF SLIDE RDFスライド板	
18	FG2 − 9713 − 000		1	SSR PCB ASSEMBLY SSR回路基板	100V SSR
	FG3 − 0142 − 000		1	SSR PCB ASSEMBLY SSR回路基板	120V SSR
	FG3 − 0137 − 000		1	SSR PCB ASSEMBLY SSR回路基板	220/240V SSR
18A	FF3 − 2979 − 000		1	CABLE, DC SSR CONNECTING DC　SSR中継束線	J12,405
18B	FF3 − 2982 − 000		1	CABLE, AC SSR CONNECTING AC　SSR中継束線	J497
19	FG3 − 0133 − 000		1	DRUM SENSOR UNIT ドラム　センサ　ユニット	J411
20	FG6 − 0516 − 000		1	APC POWER SUPPLY PCB UNIT APC電源回路基板	100V LNV,LKE,LKV,LLB 120V
	FG6 − 0539 − 000		1	APC POWER SUPPLY PCB UNIT APC電源回路基板	220/240V
20A	VD7 − 0218 − 001		1	FUSE, 125V, 8A ヒューズ	100V LNV,LKE,LKV,LLB 120V FU1
	VD7 − 0645 − 001		1	FUSE, 250V, 5A ヒューズ	220/240V FU1
21	FG6 − 0617 − 000		1	RDF SLIDER PLATE UNIT RDFスライダ板ユニット	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
105 - 22	FH3 - 2515 - 000		1	LOW VOLTAGE P. SUPPLY PCB UNIT 低圧電源回路基板	100/120V DCP1 J601~607
	FH3 - 2513 - 000		1	LOW VOLTAGE P. SUPPLY PCB UNIT 低圧電源回路基板	220/240V DCP1 J601~607
23	FH6 - 1485 - 000		1	FAN, COOLING 冷却ファン	FM7 J53
24	FH6 - 1488 - 000		1	FAN, COOLING 冷却ファン	FM17 J47
25	FH6 - 1489 - 000		1	FAN, COOLING 冷却ファン	FM18 J54
26	FH7 - 7312 - 000		1	PHOTO-INTERRUPTER フォトインタラプタ	PS2 J39
27	FS2 - 2351 - 000		1	SPRING, TENSION ヒッパリ バネ	
28	FS6 - 2315 - 000		2	SPRING, COMPRESSION アッシュク バネ	
29	FS6 - 2816 - 000		1	SPRING, COMPRESSION アッシュク バネ	
30	VR1 - 1141 - 103		3	RESISTOR, 10KOHM, 1/4W 抵抗	
31	VS1 - 5057 - 002		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J411
32	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J53
33	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J47
34	VS1 - 5057 - 004		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J54
35	VS1 - 5057 - 005		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J405
36	VS1 - 5057 - 006		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J428
37	VS1 - 5057 - 007		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J434
38	XA9 - 0249 - 000		1	SCREW,M4X8 ビス	
39	XA9 - 0633 - 000		AR	SCREW,RS,M4X8 RS タイト ネジ	
40	XA9 - 0722 - 000		1	SCREW,RS,M4X12 RS タイト ネジ	
41	XG9 - 0250 - 000		1	BEARING, BALL ボール ベアリング	
501	XB1 - 2300 - 407		5	SCREW,MACH.,TRUSS HEAD,M3X4 バインド ネジ	
502	XB1 - 2300 - 607		8	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
503	XB1 - 2302 - 009		2	SCREW,MACH.,TRUSS HEAD,M3X20 バインド ネジ	
504	XB1 - 2400 - 609		2	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
505	XB1 - 2402 - 009		2	SCREW,MACH.,TRUSS HEAD,M4X20 バインド ネジ	
506	XB1 - 2402 - 509		3	SCREW,MACH.,TRUSS HEAD,M4X25 バインド ネジ	
507	XB2 - 7400 - 606		1	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	
508	XB2 - 7400 - 607		AR	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	
509	XB2 - 8401 - 009		3	SCREW,W/WASHER,M4X10 バネツキ バインド ネジ	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
105 - 510	XB3 – 6400 – 800		AR	SCREW,RS,M4X8 RS タイト ネジ	

FIGURE 106 MACHINE REAR PLATE 2 本体後側板（2）


507
26
6
(J61)
(J62)
502
(J92)
506
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GP35,31
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510
17
18
(SL4)
(J36)
SEE FIGURE 991,995
508
4
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509
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23
(J458)
(J459)
19
(J36)
501
9
(FM11)
(FM10)
16
16
SEE FIGURE 110,111
25
(J414)
22
(J438)
28
(J412)
15
504
(J422)
20
(FM8)
13
(J15)
21
1
10
(SL6)
11A
11C
(J438)
11D
(J414)
(J14)
(PS13)
(M6)
12A
12
(J22)
505
(M10)
11B
11
5
24
27
8
(J57)
(J65)
(J63)
26
13
(J91)
(J64)
29
(J93)
7
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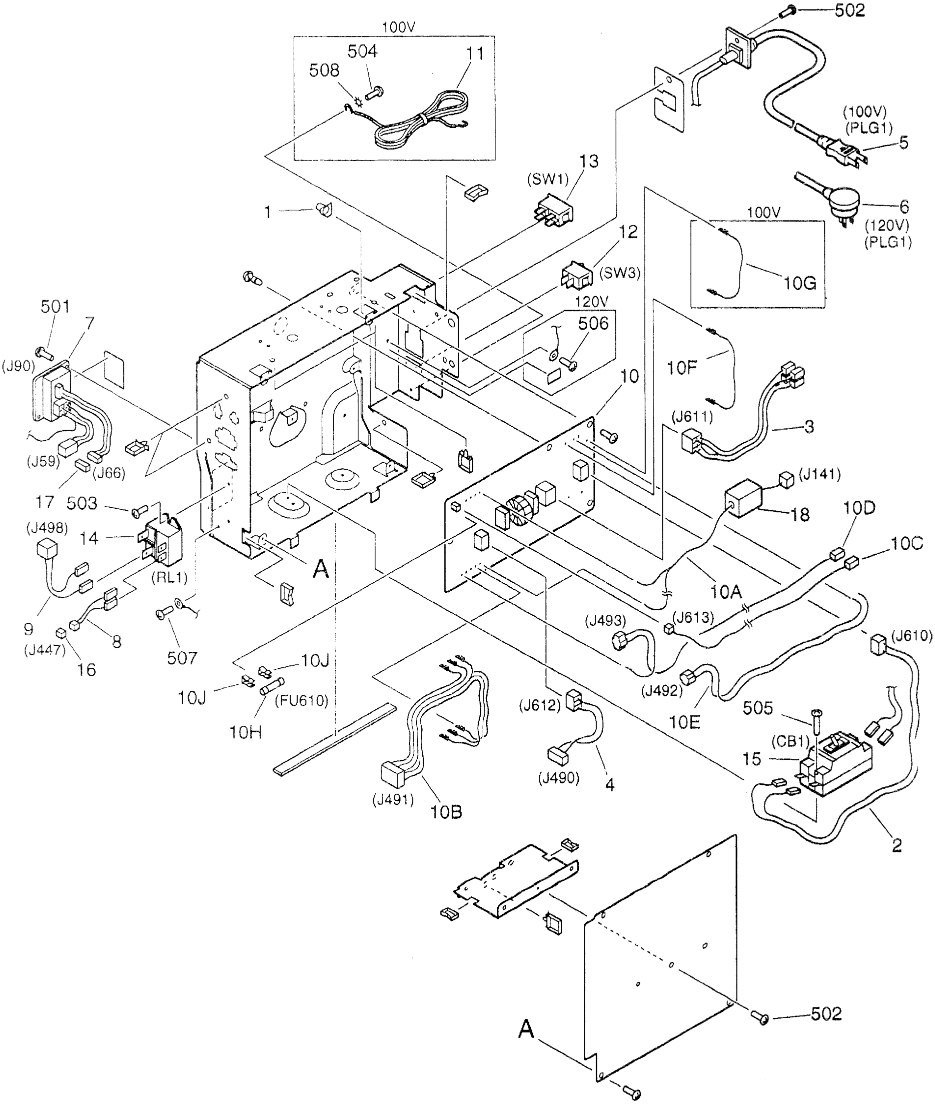
503
13

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
106 –	NPN		RF	MACHINE REAR PLATE 2 本体後側板（2）	
1	FA9 – 1800 – 000		1	CUP カップ	
2	FB3 – 2761 – 000		1	LINK, SOLENOID DRIVE ソレノイド駆動リンク	
3	FB3 – 2762 – 000		1	PLATE, CONTACT 一次電極板	
4	FB3 – 2763 – 000		1	BLOCK, CONTACT 一次電極台	
5	FB4 – 3059 – 000		1	COVER, DC DUCT DCダクト　カバー	
6	FF3 – 2965 – 000		1	CABLE, ACCESSORY INTERFACE アクセサリ　インターフェース束線	RDF J61,62,92
7	FF3 – 2965 – 000		1	CABLE, ACCESSORY INTERFACE アクセサリ　インターフェース束線	FINISHER J63,64,93
8	FF3 – 2967 – 000		1	CABLE, ACCESSORY INTERFACE アクセサリ　インターフェース束線	PAPER DECK J57,65,91
9	FF5 – 7065 – 000		1	DUCT, FAN, COOLING 低圧　冷却ファン　ダクト	
10	FG6 – 0467 – 000		1	INLET UP DOWN DRIVE UNIT 入口上下駆動ユニット	SL6 J15
11	FG6 – 0480 – 000		1	REVERSE DRIVE MOTOR UNIT 反転駆動モータ　ユニット	M10 J414
11A	FF3 – 2999 – 000		1	CABLE, LEFT DOOR SENSING 左ドア検知束線	J14,438
11B	FH7 – 7394 – 000		1	PHOTO-INTERRUPTER フォトインタラプタ	PS13 J14
11C	FS7 – 0091 – 000		1	GEAR, 20T 20T　ギア	
11D	WT2 – 5041 – 000		1	CLAMP, CABLE ケーブル　クランプ	
12	FG6 – 0487 – 000		1	DUPLEXING FEEDER DRIVE ASS'Y 両面搬送駆動	M6 J22
12A	FS7 – 0094 – 000		2	GEAR, 28T 28T　ギア	
13	FH2 – 6552 – 000		3	COVER, CONNECTOR コネクタ　カバー	
14	FH2 – 6552 – 000		1	COVER, CONNECTOR コネクタ　カバー	GP35,31
15	FH6 – 1485 – 000		1	FAN, COOLING 冷却ファン	FM8 J422
16	FH6 – 1486 – 000		2	FAN, COOLING 冷却ファン	FM10,11 J458,459
17	FH7 – 5771 – 000		1	SOLENOID ソレノイド	SL4 J36
18	FS5 – 2391 – 000		1	SPRING, TENSION ヒッパリ　バネ	
19	VS1 – 5057 – 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J36
20	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J422
21	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J15
22	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J438
23	VS1 – 5057 – 003		2	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J458,459
24	VS1 – 5057 – 004		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J22

FIGURE 110 POWER CORD TERMINAL ASSEMBLY (100/120V)
電源コード台部（100／120V）


502
100V
504
11
508
(100V)
(PLG1)
5
13
(SW1)
1
6
(120V)
(PLG1)
100V
12
(SW3)
10G
501
7
120V
506
(J90)
10
10F
(J611)
3
(J59)
(J66)
(J141)
17
503
18
10D
(J498)
14
10C
A
(RL1)
10A
(J493)
(J613)
9
8
(J610)
(J447)
507
16
10J
(J492)
10J
(FU610)
(J612)
505
10E
10H
(CB1)
15
(J490)
4
(J491)
10B
2
502
A

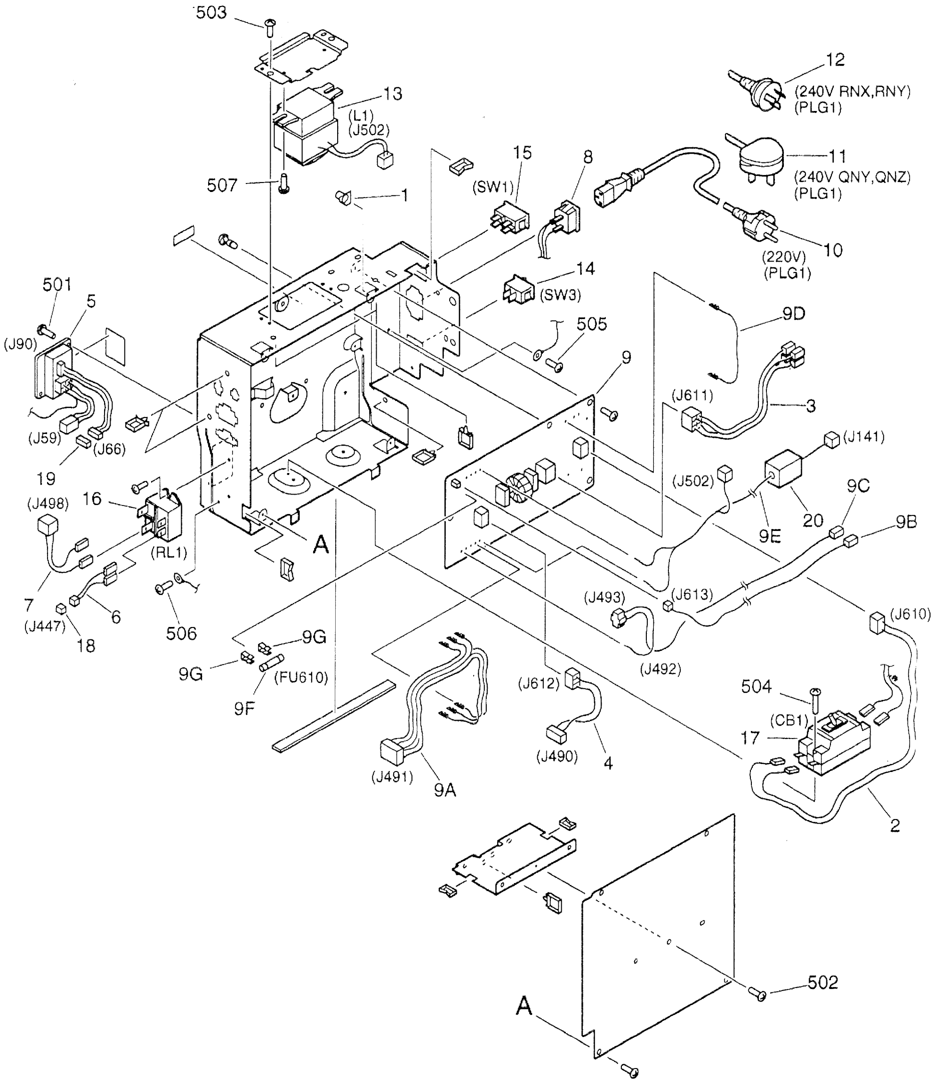
NOTE:This assembly does not include the parts shown with key No.11,16 and 17.
注：このユニットにKey　No. 11、16、17の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
106 - 25	VS1 - 5057 - 004		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J414
26	VS1 - 5057 - 005		2	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J61,63
27	VS1 - 5057 - 007		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J65
28	VS1 - 6318 - 015		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J412
29	WE8 - 5114 - 000		1	CORE, FERRITE フェライト コア	
30	XA9 - 0633 - 000		AR	SCREW,RS,M4X8 RS タイト ネジ	
501	XB1 - 2300 - 409		2	SCREW,MACH.,TRUSS HEAD,M3X4 バインド ネジ	
502	XB1 - 2300 - 607		2	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
503	XB1 - 2300 - 607		6	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
504	XB1 - 2402 - 509		2	SCREW,MACH.,TRUSS HEAD,M4X25 バインド ネジ	
505	XB2 - 7300 - 607		2	SCREW,W/WASHER,M3X6 バネツキ バインド ネジ	
506	XB2 - 7300 - 607		1	SCREW,W/WASHER,M3X6 バネツキ バインド ネジ	
507	XB2 - 7400 - 607		AR	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	
508	XB3 - 6400 - 800		AR	SCREW,RS,M4X8 RS タイト ネジ	
509	XB4 - 7300 - 609		1	SCREW,TAPPING,TRUSS HEAD,M3X6 バインド タッピン ネジ	
510	XD3 - 1300 - 102		1	PIN,SPRING スプリング ピン	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
110 -	FG6 – 0507 – 000	N	1	POWER CORD TERMINAL ASSEMBLY 電源コード台部	100V
	FG6 – 0537 – 000	N	1	POWER CORD TERMINAL ASSEMBLY 電源コード台部	120V
1	FB3 – 2351 – 000		3	CAP, DUST-PROOF ダスト　キャップ	
2	FF3 – 2955 – 000		1	CABLE, POWER CORD TERMINAL, 1 電源コード台束線 (1)	J610
3	FF3 – 2956 – 000		1	CABLE, POWER CORD TERMINAL, 2 電源コード台束線 (2)	J611
4	FF3 – 2957 – 000		1	CABLE, POWER CORD TERMINAL, 3 電源コード台束線 (3)	J612,490
5	FF3 – 2963 – 000		1	CORD, POWER SUPPLY 電源コード	PLG1 100V
6	FF3 – 2964 – 000		1	CORD, POWER SUPPLY 電源コード	PLG1 120V
7	FF3 – 2967 – 000		1	CABLE, ACCESSORY INTERFACE アクセサリ　インターフェース束線	PEDESTAL J59,66,90
8	FF3 – 2981 – 000		1	CABLE, DC RELAY CONNECTING DCリレー中継束線	J447
9	FF3 – 2984 – 000		1	CABLE, AC RELAY CONNECTING ACリレー中継束線	J498
10	FG2 – 9514 – 000		1	NOISE FILTER PCB ASSEMBLY ノイズ　フィルタ回路基板	100V
	FG2 – 9515 – 000		1	NOISE FILTER PCB ASSEMBLY ノイズ　フィルタ回路基板	120V
10A	FF3 – 2958 – 000		1	CABLE, POWER CORD TERMINAL, 4 電源コード台束線 (4)	J141
10B	FF3 – 2959 – 000		1	CABLE, POWER CORD TERMINAL, 5 電源コード台束線 (5)	J491
10C	FF3 – 2960 – 000		1	CABLE, POWER CORD TERMINAL, 6 電源コード台束線 (6)	J613
10D	FF3 – 2961 – 000		1	CABLE, POWER CORD TERMINAL, 7 電源コード台束線 (7)	J493
10E	FF3 – 2962 – 000		1	CABLE, POWER CORD TERMINAL, 8 電源コード台束線 (8)	100V J492
10F	FF3 – 3017 – 000		1	CABLE, FILTER JUMPER, 1 フィルタ　ジャンパ束線 (1)	
10G	FF3 – 3018 – 000		1	CABLE, FILTER JUMPER, 2 フィルタ　ジャンパ束線 (2)	100V
10H	VD7 – 0211 – 001		1	FUSE, 125V, 10A ヒューズ	FU610
10J	WD9 – 5001 – 000		2	HOLDER, FUSE ヒューズ　ホルダ	
11	FH2 – 5006 – 000		1	WIRE, GROUNDING アース　コード	SEE NOTE 100V
12	FH7 – 6152 – 000		1	SWITCH, ROCKER シーソ　スイッチ	SW3
13	FH7 – 6254 – 000		1	SWITCH, MAIN メイン　スイッチ	SW1
14	FH7 – 6278 – 000		1	RELAY リレー	RL1
15	FH7 – 7457 – 000		1	BREAKER, CIRCUIT サーキット　ブレーカ	CB1
16	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	SEE NOTE J447
17	VS1 – 5057 – 007		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	SEE NOTE J66
18	WE8 – 5648 – 000		1	CORE, SLEEVE FERRITE スリーブ　フェライト　コア	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
110 - 501	XB1 — 2300 — 607		2	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
502	XB1 — 2300 — 609		10	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
503	XB1 — 2400 — 609		2	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
504	XB1 — 2400 — 803		1	SCREW,MACH.,TRUSS HEAD,M4X8 バインド ネジ	100V
505	XB1 — 2402 — 009		2	SCREW,MACH.,TRUSS HEAD,M4X20 バインド ネジ	
506	XB2 — 7400 — 607		1	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	120V
507	XB6 — 7300 — 607		1	SCREW,TP,M3X6 TP ネジ	
508	XD1 — 4200 — 402		1	WASHER,TOOTHED LOCK ハツキ ザガネ	100V

FIGURE 111 POWER CORD TERMINAL ASSEMBLY (220/240V)
電源コード台部（220／240V）


503
13
(L1)
(J502)
507
1
15
(SW1)
8
12
(240V RNX,RNY)
(PLG1)
11
(240V QNY,QNZ)
(PLG1)
10
(220V)
(PLG1)
14
(SW3)
501
5
(J90)
505
9D
9
(J611)
3
(J141)
(J59)
(J66)
19
(J502)
9C
16
(J498)
20
9E
9B
(RL1)
A
7
6
(J447)
18
506
(J613)
(J493)
(J610)
9G
9G
(FU610)
9F
(J492)
(J612)
504
(CB1)
17
(J490)
4
(J491)
9A
2
502
A

NOTE:This assembly does not include the parts shown with key No.10,11,12,18 and 19.
注：このユニットにKey No. 10、11、12、18、19の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
111 -	FG6 − 0538 − 000	N	1	POWER CORD TERMINAL ASSEMBLY 電源コード台部	220V 240V QNY,QNZ
	FG6 − 3866 − 000	N	1	POWER CORD TERMINAL ASSEMBLY 電源コード台部	240V RNX,RNY
1	FB3 − 2351 − 000		3	CAP, DUST-PROOF ダスト キャップ	
2	FF3 − 2955 − 000		1	CABLE, POWER CORD TERMINAL, 1 電源コード台束線 (1)	J610
3	FF3 − 2956 − 000		1	CABLE, POWER CORD TERMINAL, 2 電源コード台束線 (2)	J611
4	FF3 − 2957 − 000		1	CABLE, POWER CORD TERMINAL, 3 電源コード台束線 (3)	J612,490
5	FF3 − 2967 − 000		1	CABLE, ACCESSORY INTERFACE アクセサリ インターフェース束線	PEDESTAL J59,66,90
6	FF3 − 2981 − 000		1	CABLE, DC RELAY CONNECTING DCリレー中継束線	J447
7	FF3 − 2984 − 000		1	CABLE, AC RELAY CONNECTING ACリレー中継束線	J498
8	FF3 − 3004 − 000		1	SOCKET, AC ACソケット	
9	FG2 − 9516 − 000		1	NOISE FILTER PCB ASSEMBLY ノイズ フィルタ回路基板	220V 240V QNY,QNZ
	FG3 − 0148 − 000		1	NOISE FILTER PCB ASSEMBLY ノイズ フィルタ回路基板	240V RNX,RNY
9 A	FF3 − 2959 − 000		1	CABLE, POWER CORD TERMINAL, 5 電源コード台束線 (5)	J491
9 B	FF3 − 2960 − 000		1	CABLE, POWER CORD TERMINAL, 6 電源コード台束線 (6)	J613
9 C	FF3 − 2961 − 000		1	CABLE, POWER CORD TERMINAL, 7 電源コード台束線 (7)	J493
9 D	FF3 − 3017 − 000		1	CABLE, FILTER JUMPER, 1 フィルタ ジャンパ束線 (1)	
9 E	FF3 − 3025 − 000		1	CABLE, POWER CORD TERMINAL, 4 電源コード台束線 (4)	J141,502
9 F	VD7 − 0641 − 001		1	FUSE, 1A, 250V ヒューズ	FU610
9 G	WD9 − 5001 − 000		2	HOLDER, FUSE ヒューズ ホルダ	
10	FH2 − 5761 − 020		1	CORD, POWER 電源コード	SEE NOTE PLG1 220V
11	FH2 − 5762 − 000		1	CORD, POWER 電源コード	SEE NOTE PLG1 240V QNY,QNZ
12	FH2 − 5763 − 000		1	CORD, POWER 電源コード	SEE NOTE PLG1 240V RNX,RNY
13	FH3 − 2514 − 000		1	CHOKE COIL チョーク コイル	L1 J502
14	FH7 − 6152 − 000		1	SWITCH, ROCKER シーソ スイッチ	SW3
15	FH7 − 6254 − 000		1	SWITCH, MAIN メイン スイッチ	SW1
16	FH7 − 6278 − 000		1	RELAY リレー	RL1
17	FH7 − 7458 − 000		1	BREAKER, CIRCUIT サーキット ブレーカ	CB1
18	VS1 − 5057 − 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	SEE NOTE J447
19	VS1 − 5057 − 007		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	SEE NOTE J66
20	WE8 − 5648 − 000		1	CORE, SLEEVE FERRITE スリーブ フェライト コア	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
111 - 501	XB1 - 2300 - 607		2	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
502	XB1 - 2300 - 609		9	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
503	XB1 - 2400 - 609		4	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
504	XB1 - 2402 - 009		2	SCREW,MACH.,TRUSS HEAD,M4X20 バインド ネジ	
505	XB2 - 7400 - 607		1	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	
506	XB6 - 7300 - 607		1	SCREW,TP,M3X6 TP ネジ	
507	XB6 - 7300 - 805		2	SCREW,TP,M3X8 TP ネジ	

FIGURE 120 RIGHT DOOR ASSEMBLY 右扉部

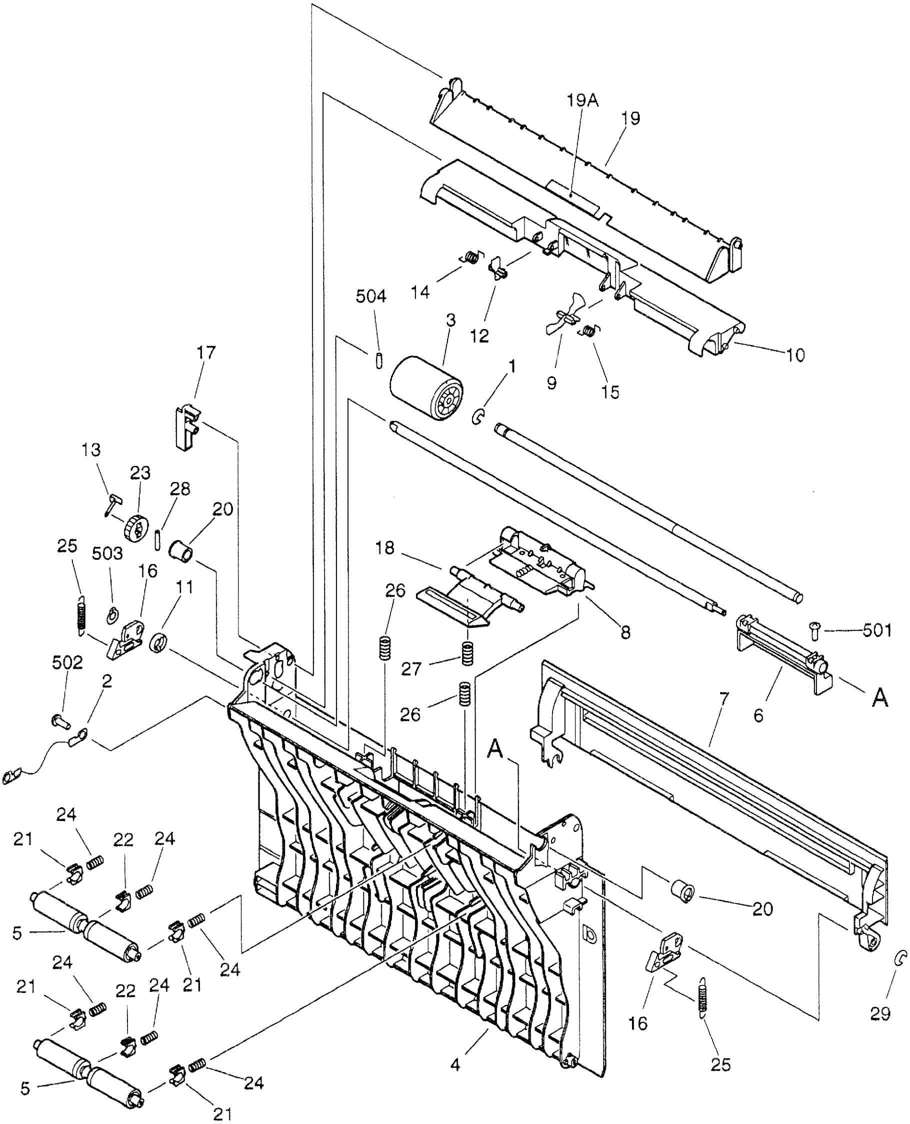
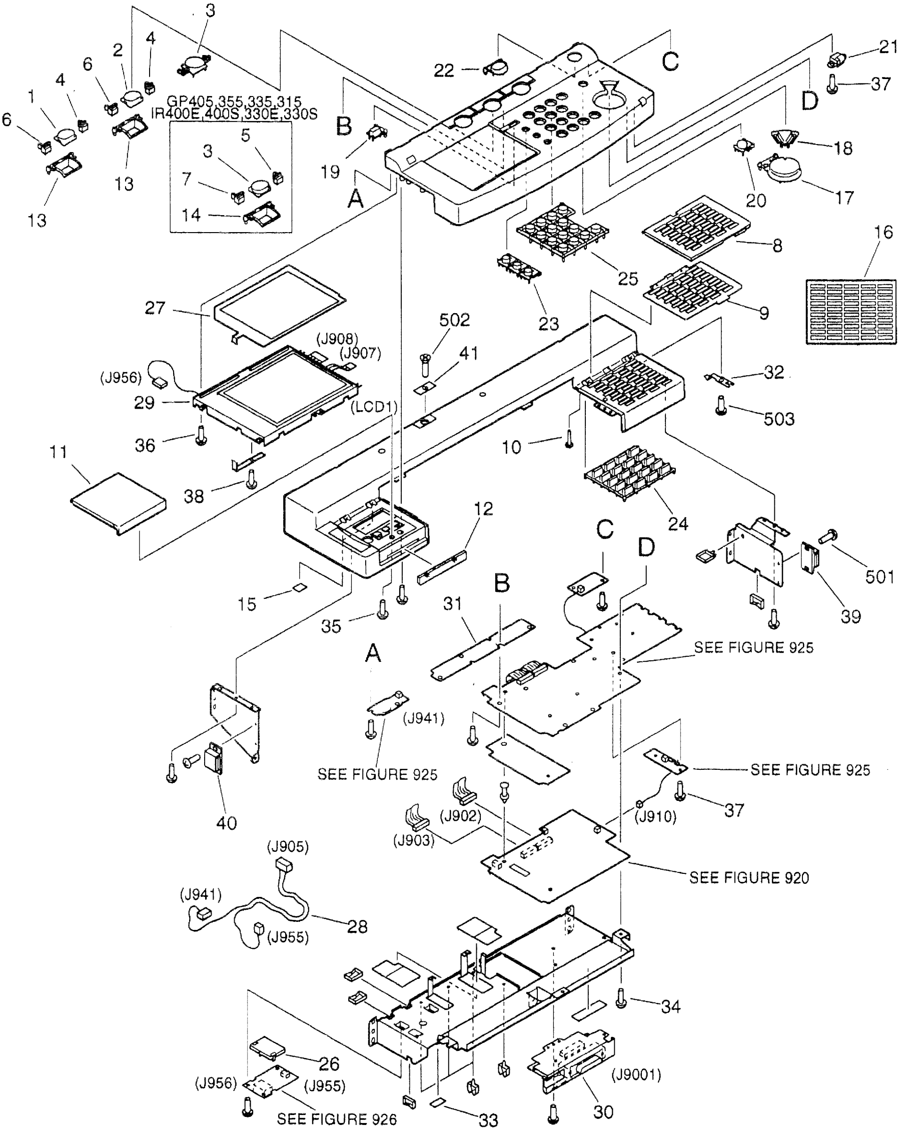

19A
19
14
12
504
3
10
9
15
17
1
13
23
28
20
18
25
503
16
11
26
8
501
27
502
2
26
7
6
A
A
24
21
22
24
20
5
24
21
24
22
24
21
16
29
25
4
5
24
21

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
120 -	FG6 — 0452 — 000		1	RIGHT DOOR ASSEMBLY 右扉部	
1	FA4 — 1159 — 000		1	RING, RETAINING 止め輪	
2	FB1 — 8439 — 000		1	WIRE, DOOR SUPPORT ドア支えワイヤ	
3	FB1 — 8581 — 000		1	ROLLER, MULTI FEED マルチ手差しローラ	
4	FB3 — 2810 — 020		1	DOOR, RIGHT 右扉	
5	FB3 — 2811 — 000		2	ROLLER, BELT IDLER 従動ローラ	
6	FB3 — 2812 — 000		1	HANDLE, RIGHT DOOR 右扉把手	
7	FB3 — 2814 — 000		1	DOOR, RIGHT, UPPER 右扉（上）	
8	FB3 — 2815 — 000		1	ARM, MULTI FEED, 1 手差しアーム（1）	
9	FB3 — 2818 — 020		1	FLAG, PAPER SENSOR, 1 紙センサ　フラッグ（1）	
10	FB3 — 2819 — 000		1	COVER, MULTI FEED ROLLER マルチ　ローラ　カバー	
11	FB3 — 2821 — 000		1	BUSHING ブッシング	
12	FB3 — 2833 — 000		1	FLAG, PAPER SENSOR, 2 紙センサ　フラグ（2）	
13	FB3 — 2834 — 000		1	PLATE, MULTI ROLLER GROUNDING ローラ　アース板	
14	FB3 — 2835 — 000		1	SPRING, TORSION ネジリ　バネ	
15	FB4 — 3170 — 000		1	SPRING, TORSION ネジリ　バネ	
16	FB4 — 3328 — 000		2	HOOK, RIGHT DOOR 右扉フック	
17	FB4 — 3329 — 000		1	ARM, CAM FOLLOWER カム　フォロア　アーム	
18	FE5 — 4132 — 000		1	ARM, MULTI FEED マルチ手差しアーム	
19	FF5 — 4488 — 000		1	PLATE, MULTI FEED 手差し中板	
19A	FB1 — 8584 — 000		1	SHEET, MULTI FEED PLATE マルチ手差し中板シート	
20	FS5 — 1209 — 000		2	BUSHING ブッシング	
21	FS5 — 1595 — 000		4	BUSHING, VERTICAL ROLLER 従動ローラ軸受	
22	FS5 — 1598 — 000		2	BUSHING, VERTICAL ROLLER 従動ローラ軸受	
23	FS6 — 0578 — 000		1	GEAR, 19T 19T　ギア	
24	FS6 — 2308 — 000		6	SPRING, COMPRESSION アッシュク　バネ	
25	FS6 — 2337 — 000		2	SPRING, TENSION ヒッパリ　バネ	
26	FS6 — 2790 — 000		2	SPRING, COMPRESSION アッシュク　バネ	
27	FS6 — 2791 — 000		1	SPRING, COMPRESSION アッシュク　バネ	
28	XD9 — 0104 — 000		1	PIN,DOWEL ヘイコウ　ピン	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
120 - 29	XD9 – 0134 – 000		1	RING,E E リング	
501	XB1 – 2400 – 809		1	SCREW,MACH.,TRUSS HEAD,M4X8 バインド ネジ	
502	XB4 – 7400 – 809		1	SCREW,TAPPING,TRUSS HEAD,M4X8 バインド タッピン ネジ	
503	XD2 – 2100 – 602		1	RING,GRIP グリップ リング	
504	XD3 – 2160 – 162		1	PIN,DOWEL ヘイコウ ピン	

FIGURE 130 CONTROL PANEL ASSEMBLY 操作部


3
2
4
6
4
1
6
13
13
GP405,355,335,315
IR400E,400S,330E,330S
5
3
7
14
22
C
21
37
D
B
19
A
18
20
17
16
8
25
23
9
27
502
41
(J908)
(J907)
(J956)
29
(LCD1)
36
11
38
32
503
10
24
12
C
D
501
39
15
35
31
B
A
SEE FIGURE 925
(J941)
SEE FIGURE 925
40
SEE FIGURE 925
37
(J902)
(J903)
(J910)
(J905)
SEE FIGURE 920
(J941)
28
(J955)
34
26
(J956)
(J955)
(J9001)
SEE FIGURE 926
33
30

NOTE1:This assembly includes the assemblies shown in Figure 920,925 and 926.
NOTE2:This assembly does not include the parts shown with key No.16,41 and 502.
注1：このユニットはFigure 920、925、926のユニットを含みます。
注2：このユニットにKey No. 16、41、502の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
130 -	FG6 – 0609 – 000		1	CONTROL PANEL ASSEMBLY 操作部	GP405,355,315 JAPANESE SEE NOTE 1
	FG6 – 0607 – 000		1	CONTROL PANEL ASSEMBLY 操作部	GP405,335 ITALIAN GP405 ENGLISH UNY GP335 ENGLISH UNZ SEE NOTE 1
	FG6 – 0504 – 000		1	CONTROL PANEL ASSEMBLY 操作部	GP405 ENGLISH PNW GP405 ENGLISH RNX GP335 ENGLISH PNX GP335 ENGLISH RNY SEE NOTE 1
	FG6 – 0601 – 000		1	CONTROL PANEL ASSEMBLY 操作部	GP405 ENGLISH QNY GP335 ENGLISH QNZ SEE NOTE 1
	FG6 – 0603 – 000		1	CONTROL PANEL ASSEMBLY 操作部	GP405,335 FRENCH SEE NOTE 1
	FG6 – 0605 – 000		1	CONTROL PANEL ASSEMBLY 操作部	GP405,335 GERMAN SEE NOTE 1
	FG6 – 0499 – 000		1	CONTROL PANEL ASSEMBLY 操作部	GP40,35F,35,31F,31 JAPANESE SEE NOTE 1
	FG6 – 0502 – 000		1	CONTROL PANEL ASSEMBLY 操作部	iR400E,400S iR330E,330S SEE NOTE 1
1	FB3 – 2526 – 000		1	KEY TOP, FUNCTION, 1 ファンクション キー (1)	GP405 JAPANESE G40,35F,35,31F,31
	FB4 – 3005 – 000		1	KEY TOP, FUNCTION, 1 ファンクション キー (1)	GP405 ENGLISH PNW,QNY,RNX GP335 ENGLISH PNX,QNZ,RNY iR400E,400S iR330E,330S
	FB4 – 3008 – 000		1	KEY TOP, FUNCTION, 1 ファンクション キー (1)	GP405 FRENCH GP335 FRENCH
	FB4 – 3010 – 000		1	KWY TOP, FUNCTION, 1 ファンクション キー (1)	GP405 GERMAN GP335 GERMAN
	FB4 – 3142 – 000		1	KEY TOP, FUNCTION, 1 ファンクション キー (1)	GP405 ITALIAN GP405 ENGLISH UNY GP335 ITALIAN GP335 ENGLISH UNZ
2	FB3 – 2527 – 000		1	KEY TOP, FUNCTION, 2 ファンクション キー (2)	GP405 JAPANESE GP355,315,40,35F,35 GP31F,31
	FB4 – 3006 – 000		1	KEY TOP, FUNCTION, 2 ファンクション キー (2)	GP405 ENGLISH PNW,QNY,RNX GP405 FRENCH,GERMAN GP335 ENGLISH PNX,QNZ,RNY GP335 FRENCH,GERMAN iR400E,400S iR330E,330S
	FB4 – 3143 – 000		1	KEY TOP, FUNCTION, 2 ファンクション キー (2)	GP405 ITALIAN GP405 ENGLISH UNY GP335 ITALIAN GP335 ENGLISH UNZ

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
130 - 3	FB3 – 2528 – 000		1	KEY TOP, FUNCTION, 3 ファンクション キー (3)	GP405 JAPANESE GP355,315 JAPANESE
	FB4 – 3003 – 000		1	KEY TOP, FUNCTION, 3 ファンクション キー (3)	GP40,35F,35,31F,31 JAPANESE
	FB4 – 3007 – 000		1	KEY TOP, FUNCTION, 3 ファンクション キー (3)	ENGLISH PNW,QNY,RNX ENGLISH PNX,QNZ,RNY iR400E,400S iR330E,330S
	FB4 – 7864 – 000		1	KEY TOP, FUNCTION, 3 ファンクション キー (3)	FRENCH
	FB4 – 7867 – 000		1	KEY TOP, FUNCTION, 3 ファンクション キー (3)	GERMAN
	FB4 – 7871 – 000		1	KEY TOP, FUNCTION, 3 ファンクション キー (3)	ITALIAN ENGLISH UNY,UNZ
4	FB3 – 2529 – 000		2	COVER, LED PANEL, RIGHT LEDパネル カバー (右)	
5	FB3 – 2529 – 000		1	COVER, LED PANEL, RIGHT LEDパネル カバー (右)	GP405,355,335,315 iR400E,400S iR330E,330S
6	FB3 – 2530 – 000		2	COVER, LED PANEL, LEFT LEDパネル カバー (左)	
7	FB3 – 2530 – 000		1	COVER, LED PANEL, LEFT LEDパネル カバー (左)	GP405,355,335,315 iR400E,400S iR330E,330S
8	FB3 – 2533 – 000		1	COVER, ONE-TOUCH KEY TOP, 1 ワンタッチ カバー (1)	
9	FB3 – 2534 – 000		1	COVER, ONE-TOUCH KEY TOP, 2 ワンタッチ カバー (2)	
10	FB3 – 2538 – 000		2	ACTUATOR アクチュエータ	
11	FB3 – 2540 – 000		1	COVER, CC-5 CC−5 カバー	
12	FB3 – 2541 – 000		1	PLATE, CARD BLANKING カード目隠し板	
13	FB3 – 2542 – 000		2	BLOCK, REFLECTOR 反射ブロック	
14	FB3 – 2542 – 000		1	BLOCK, REFLECTOR 反射ブロック	GP405,355,335,315 iR400E,400S
					iR330E,330S
15	FB3 – 2544 – 000		2	SHEET, BLANKING 目隠しシート	
16	FB3 – 2553 – 000		2	LABEL, ONE-TOUCH KEY ワンタッチ キー ラベル	SEE NOTE 2
17	FB4 – 2581 – 000		1	KEY TOP, COPY コピー キー	
18	FB4 – 2582 – 000		1	KEY TOP, STOP ストップ キー	
19	FB4 – 2583 – 000		1	KEY TOP, RESET リセット キー	
20	FB4 – 2994 – 000		1	KEY TOP, ENERGY SAVE エナジ セーブ キー	
21	FB4 – 2995 – 000		1	COVER, PILOT LAMP パイロット ランプ カバー	
22	FB4 – 2996 – 000		1	KEY TOP, POWER SUPPLY 電源キー	
23	FB4 – 2997 – 000		1	KEY TOP, 3 LIGHT 3ライト キー	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
130 - 24	FB4 — 2998 — 000		1	KEY TOP, ONE-TOUCH ワンタッチ キー	
25	FB4 — 2999 — 000		1	KEY TOP, NUMBER テン キー	
26	FB4 — 3002 — 000		1	COVER, INVERTER インバータ カバー	
27	FB4 — 3151 — 000		1	SHEET, LCD INSULATING LCD絶縁シート	
28	FG2 — 9636 — 000		1	CABLE, CONTROL PANEL 操作部束線	J905,941,955
29	FG6 — 0365 — 000		1	LCD CONTROL PANEL UNIT 液晶パネル	LCD1 J907,908,956
30	FG6 — 0496 — 000		1	DOWN LOAD PCB ASSEMBLY ダウン ロード回路基板	J9001～9003
31	FH6 — 0736 — 000		1	FUNCTION KEY PCB ASSEMBLY ファンクション キー回路ユニット	GP40,35,35F,31,31F
	FH6 — 0769 — 000		1	FUNCTION KEY PCB ASSEMBLY ファンクション キー回路ユニット	GP405,355,335,315 iR400E,400S iR330E,330S
32	FS6 — 2304 — 000		2	SPRING, LEAF 板バネ	
33	ME1 — 0038 — 000		1	LABEL, "WARNING, HIGH VOLTAGE" 高圧注意ラベル	
34	XA9 — 0591 — 000		11	SCREW,M3X8 タイト ネジ	
35	XA9 — 0591 — 000		1	SCREW,M3X8 タイト ネジ	
36	XA9 — 0596 — 000		4	SCREW,P,M3X6 P タイト ネジ	
37	XA9 — 0596 — 000		26	SCREW,P,M3X6 P タイト ネジ	
38	XA9 — 0670 — 000		1	SCREW,M3X6 セムス ネジ	
39	XZ9 — 0428 — 000		1	MAGNET CATCH マグネット キャッチ	
40	XZ9 — 0478 — 000		1	LATCH, MAGNET マグネット キャッチ	
41	FA9 — 3609 — 000		1	PLATE, COVER 穴ふさぎ	SEE NOTE 2 GP405,40 35F,31F
					iR400E,400S
	FB3 — 8864 — 000		1	PLATE, COVER 穴ふさぎ	SEE NOTE 2 GP355,335,315,35,31 iR330E,330S
501	XB1 — 2300 — 609		10	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
502	XB1 — 3400 — 806		1	SCREW,MACH.,C.S. HEAD,M4X8 サラ ネジ	SEE NOTE 2
503	XB4 — 7200 — 409		2	SCREW,TAPPING,TRUSS HEAD,M2X4 バインド タッピン ネジ	

FIGURE 160 COPYBOARD COVER ASSEMBLY (GP35/31)
原稿台カバー部（GP35／31）

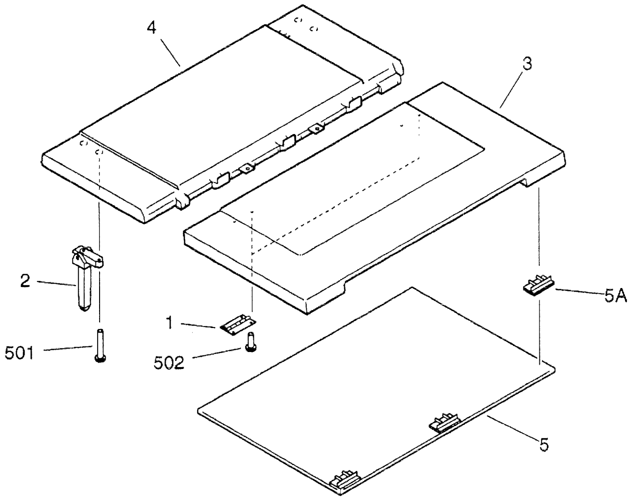


FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
160 -	FG5 - 2947 - 060		1	COPYBOARD COVER ASSEMBLY 原稿台カバー部	GP35,31
1	FA5 - 1185 - 000		2	PLATE, HINGE ヒンジ板	
2	FA6 - 5650 - 000		2	HINGE, COPYBOARD COVER ヒンジ	
3	FB2 - 2517 - 020		1	COVER, COPYBOARD, FRONT 圧板（前）	
4	FB2 - 2518 - 000		1	COVER, COPYBOARD, REAR 圧板（後）	
5	FF2 - 3941 - 020		1	CUSHION ASS'Y, COPYBOARD COVER 圧着シート ユニット	
5 A	FA3 - 9055 - 000		3	PLATE, CUSHION MOUNTING シート取付板	
501	XB1 - 2401 - 609		4	SCREW,MACH.,TRUSS HEAD,M4X16 バインド ネジ	
502	XB4 - 7400 - 809		8	SCREW,TAPPING,TRUSS HEAD,M4X8 バインド タッピン ネジ	

FIGURE 180 COUNTER ASSEMBLY カウンタ部

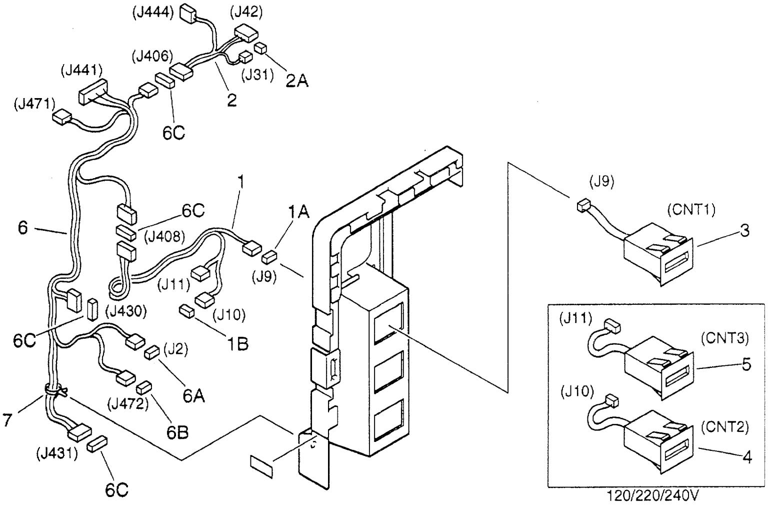
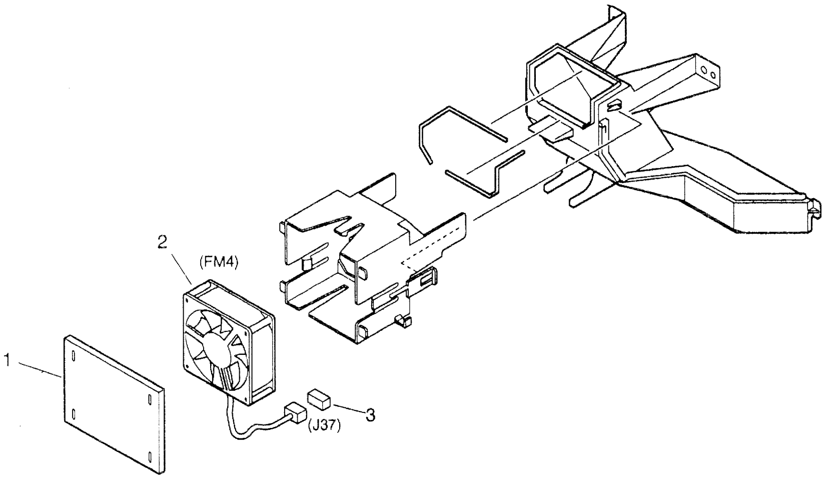

(J444)
(J42)
(J406)
(J441)
(J31)
2A
2
(J471)
6C
1
(J9)
6C
1A
(CNT1)
6
(J408)
3
(J11)
(J9)
(J430)
(J10)
(J11)
6C
(J2)
1B
(CNT3)
5
6A
(J10)
(J472)
7
6B
(CNT2)
(J431)
4
6C
120/220/240V

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
180 -	FG6 − 0571 − 000		1	COUNTER ASSEMBLY カウンタ部	100V
	FG6 − 0574 − 000		1	COUNTER ASSEMBLY カウンタ部	120/220/240V
1	FF3 − 2972 − 000		1	CABLE, COUNTER CONNECTING カウンタ中継束線	J9〜11,408
1 A	VS1 − 5057 − 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J9
1 B	VS1 − 5057 − 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J10
2	FF3 − 3003 − 000		1	CABLE, FIXING MOTOR 定着モータ束線	J31,42,406,444
2 A	VS1 − 5057 − 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J31
3	FF3 − 3005 − 000		1	COUNTER, 1 カウンタ (1)	CNT1 J9
4	FF3 − 3006 − 000		1	COUNTER, 2 カウンタ (2)	120/220/240V CNT2 J10
5	FF3 − 3007 − 000		1	COUNTER, 3 カウンタ (3)	120/220/240V CNT3 J11
6	FG2 − 9492 − 000		1	CABLE, FRONT 前束線	J2,406,408,430,431 J441,471,472
6 A	VS1 − 5057 − 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J2
6 B	VS1 − 5057 − 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J472
6 C	VS1 − 5057 − 006		4	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J406,408,430,431
7	WT2 − 5041 − 000		1	CLAMP, CABLE ケーブル　クランプ	

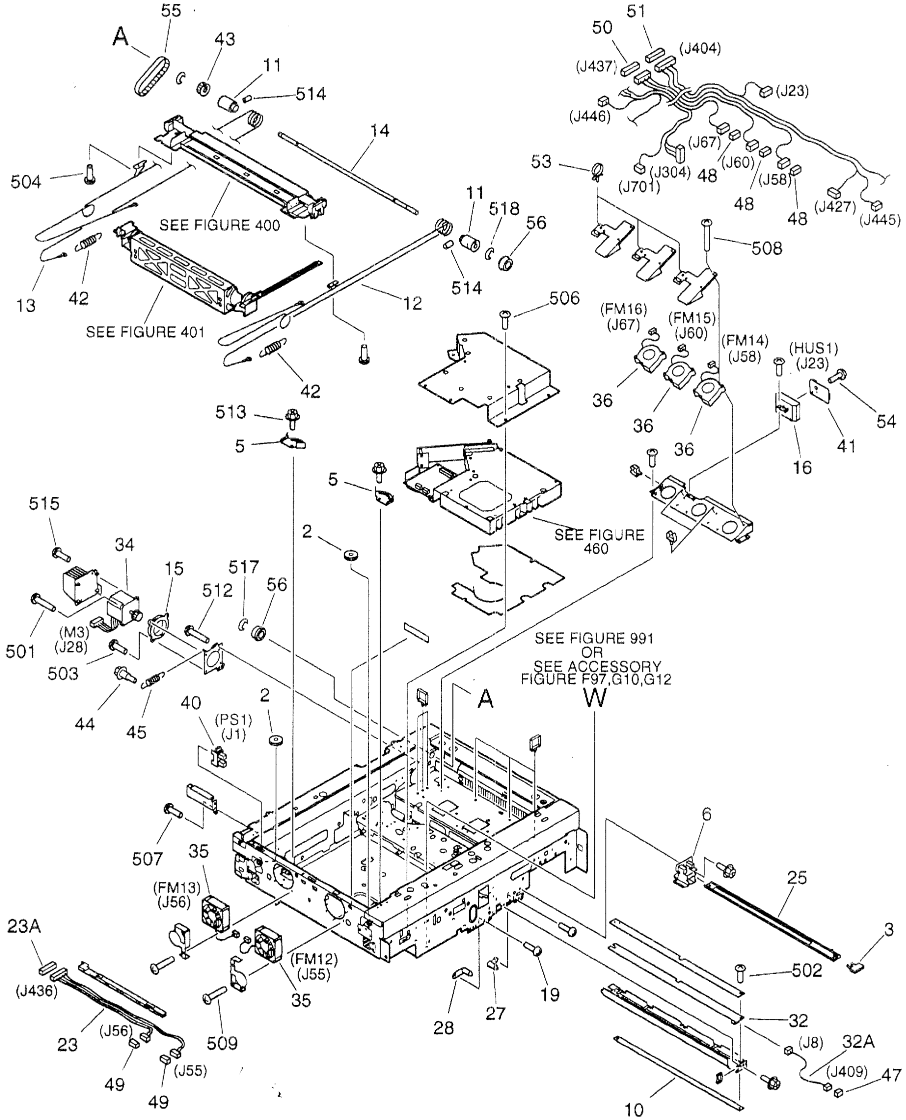
FIGURE 191 LASER COOLING FAN ASSEMBLY
レーザ冷却ファン部



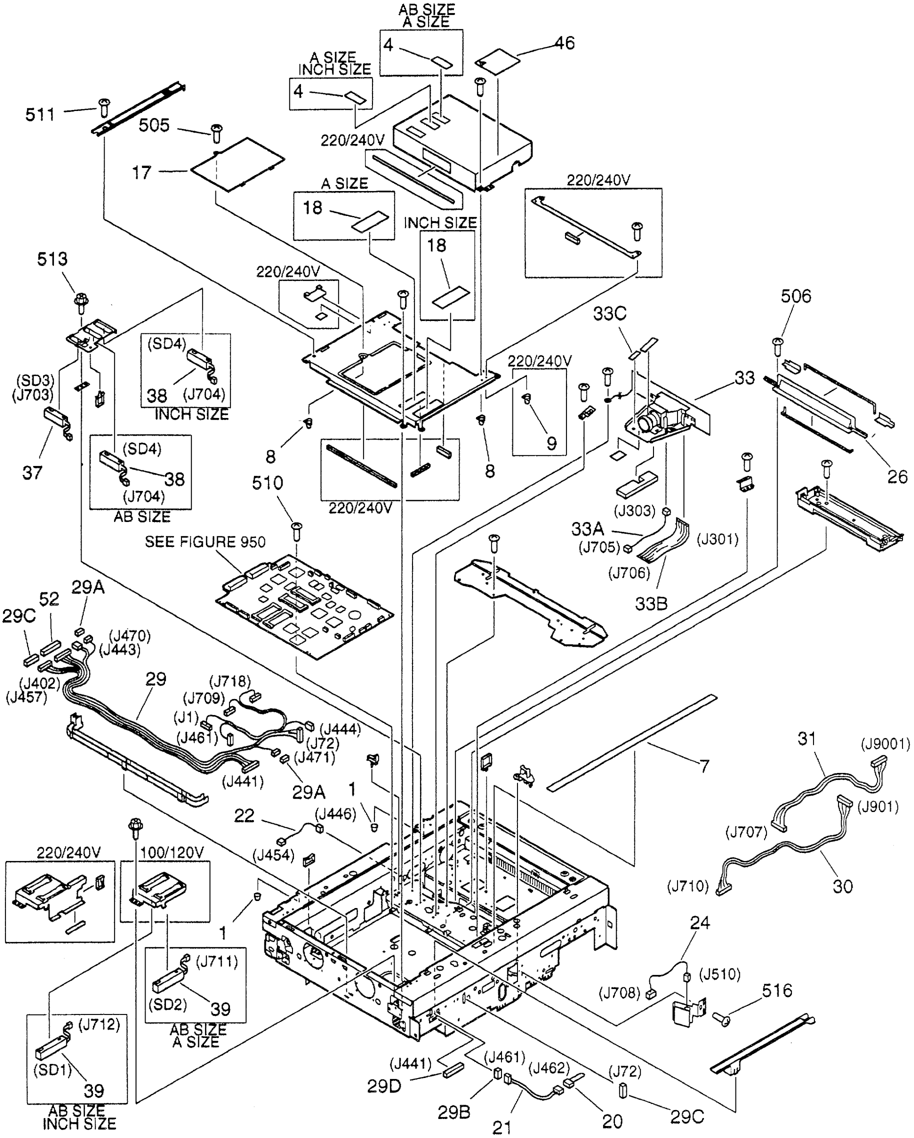
NOTE:This assembly does not include the part shown with key No.3.
注：このユニットにKey No. 3の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
191 –	FG6 – 0579 – 000		1	LASER COOLING FAN ASSEMBLY レーザ冷却ファン部	
1	FB3 – 2766 – 000		1	FILTER, AIR 冷却ファン フィルタ	
2	FH6 – 1487 – 000		1	FAN, COOLING 冷却ファン	FM4 J37
3	VS1 – 5057 – 004		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	SEE NOTE J37

FIGURE 210 LENS MOUNT ASSEMBLY(1/2)
レンズ台部(1/2)


55
A
43
11
514
14
504
SEE FIGURE 400
13
42
SEE FIGURE 401
11
518
56
514
12
42
51
50
(J404)
(J437)
(J23)
(J446)
(J67)
53
(J304)
48
(J60)
(J701)
48
(J58)
48
(J427)
(J445)
508
506
(FM16)
(J67)
(FM15)
(J60)
(FM14)
(J58)
(HUS1)
(J23)
36
36
36
54
41
16
513
5
5
SEE FIGURE 460
515
34
2
15
517
512
56
501
(M3)
(J28)
503
44
45
SEE FIGURE 991
OR
SEE ACCESSORY
FIGURE F97,G10,G12
W
A
40
(PS1)
(J1)
2
507
35
(FM13)
(J56)
23A
(J436)
(FM12)
(J55)
35
23
(J56)
49
(J55)
49
509
28
27
19
6
25
3
502
32
(J8)
32A
(J409)
47
10

# FIGURE 210 LENS MOUNT ASSEMBLY(2/2)
レンズ台部(2/2)



AB SIZE
A SIZE
4
46
A SIZE
INCH SIZE
4
511
505
220/240V
17
A SIZE
18
INCH SIZE
18
220/240V
513
220/240V
506
33C
(SD4)
38
(J704)
INCH SIZE
(SD3)
(J703)
220/240V
33
9
8
37
(SD4)
38
(J704)
AB SIZE
8
8
26
510
220/240V
(J303)
33A
(J705)
(J301)
(J706)
33B
SEE FIGURE 950
29A
29C
52
(J470)
(J443)
(J402)
(J457)
29
(J718)
(J709)
(J1)
(J461)
(J444)
(J72)
(J471)
(J441)
29A
1
7
31
(J9001)
(J901)
(J707)
(J710)
30
22
(J446)
(J454)
220/240V
100/120V
1
(J711)
(SD2)
39
AB SIZE
A SIZE
24
(J510)
(J708)
516
(J712)
(SD1)
39
AB SIZE
INCH SIZE
(J441)
29D
(J461)
(J462)
(J72)
29B
21
20
29C

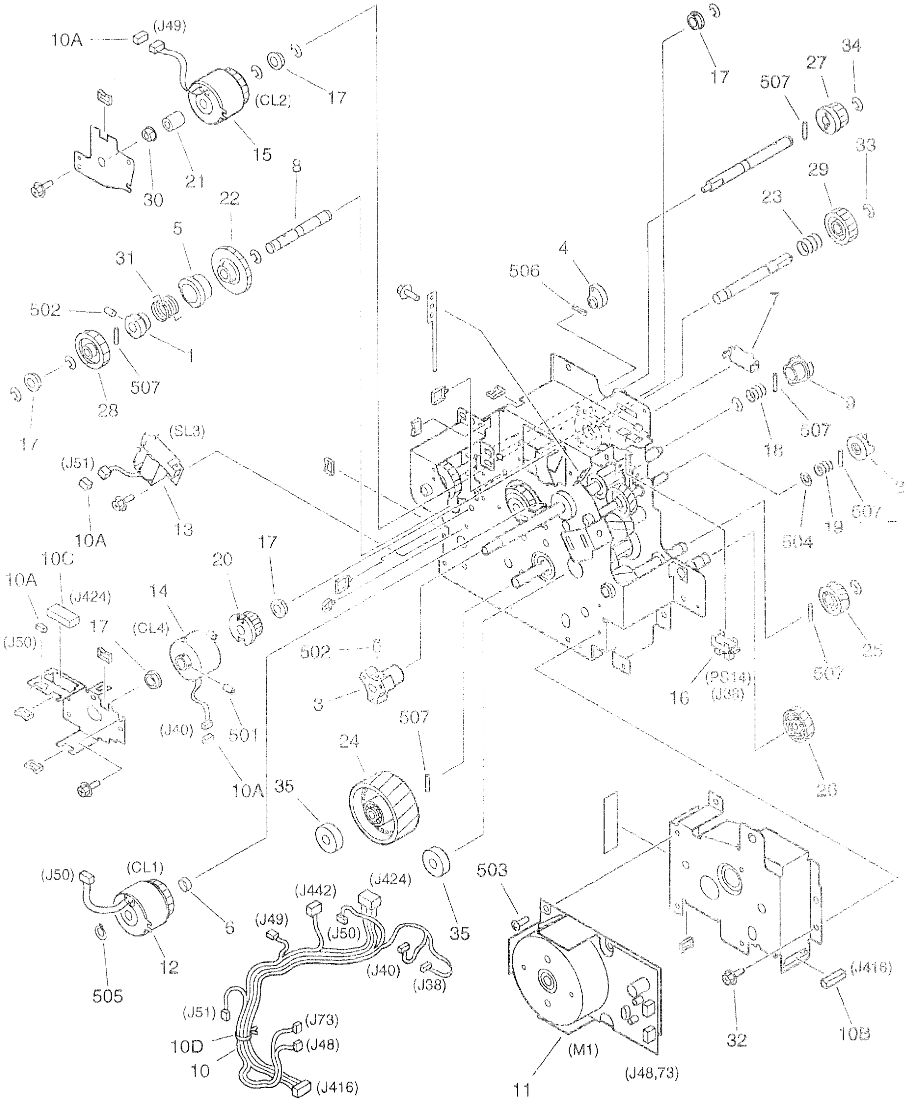
FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
210 -	NPN		RF	LENS MOUNT ASSEMBLY レンズ台部	
1	FA9 − 1800 − 000		4	CUP カップ	
2	FB1 − 7109 − 000		2	PULLEY プーリ	
3	FB1 − 7211 − 000		1	KNOB, DUST-PROOF ガラス板把手	
4	FB1 − 7848 − 000		1	SHEET, BLANKING 目隠しシート	AB SIZE,INCH SIZE
	FB1 − 7848 − 000		2	SHEET, BLANKING 目隠しシート	A SIZE
5	FB3 − 2232 − 000		1	HOOK, WIRE, FRONT ワイヤ　フック（前）	
6	FB3 − 2245 − 000		1	BLOCK, GUIDE, FRONT ガイド　ブロック（前）	
7	FB3 − 2336 − 000		2	PLATE, RAIL レール板	
8	FB3 − 2351 − 000		3	CAP, DUST-PROOF ダスト　キャップ	
9	FB3 − 2351 − 000		2	CAP, DUST-PROOF ダスト　キャップ	220/240V
10	FB3 − 2765 − 000		1	FILTER, PRECONDITION. EXPOSURE 前露光フィルタ	
11	FB4 − 2762 − 000		2	PULLEY, DRIVE, 2 駆動プーリ（2）	
12	FB4 − 2763 − 000		1	WIRE, SCANNER, FRONT 光学ワイヤ（前）	
13	FB4 − 2764 − 000		1	WIRE, SCANNER, REAR 光学ワイヤ（後）	
14	FB4 − 2770 − 000		1	SHAFT, DRIVE 駆動軸	
15	FB4 − 2775 − 000		1	DAMPER, SCANNER MOTOR 光学モータ防振ゴム	
16	FB4 − 3031 − 000		1	HOLDER, HUMIDITY SENSOR 湿度センサ　ホルダ	
17	FB4 − 3238 − 000		1	PLATE, I. PROCESSOR ROM COVER イメージ　プロセッサROMカバー板	
18	FB5 − 0290 − 000		1	SHEET, BLANKING 目隠しシート	A SIZE,INCH SIZE
19	FE9 − 0324 − 000		2	SCREW,MACH.,TRUSS HEAD,M4X6 バインド　ネジ	
20	FF3 − 1147 − 000		1	CABLE, CCV CCV束線	J462
21	FF3 − 2970 − 000		1	CABLE, CCV CONNECTING, 1 CCV中継束線（1）	J461,462
22	FF3 − 3002 − 000		1	CABLE, HAND SET CONNECTING ハンド　セット中継束線	J454,446
23	FF3 − 3014 − 000		1	CABLE, LEFT UPPER FAN 左上ファン束線	J55,56,436
23A	VS1 − 5057 − 006		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J436
24	FF3 − 3023 − 000		1	CABLE, BEAM DETECTOR ビーム　ディテクタ束線	J510,708
25	FF5 − 1203 − 000		1	PLATE, DUST-PROOF GLASS, 2 防塵ガラス板（2）	
26	FF5 − 7087 − 000		1	PLATE, SCANNER BLANKING スキャナ遮蔽板	
27	FF5 − 7114 − 000		1	PIN, POSITIONING, RIGHT 位置決めピン（右）	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
210 - 28	FF5 − 7115 − 000		1	PIN, POSITIONING, LEFT 位置決めピン（左）	
29	FG2 − 9494 − 000		1	DC LEFT FRONT CABLE DC左前束線	J1,72,402,441,443, J444,457,461,470 J471,709,718
29A	VS1 − 5057 − 003		2	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J470,471
29B	VS1 − 5057 − 005		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J461
29C	VS1 − 5057 − 009		2	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J72,449
29D	VS1 − 6319 − 028		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J441
30	FG2 − 9691 − 000		1	CABLE, I. PROCES.-CONT. PANEL 操作ーイメージ　プロセッサ束線	J710,901
31	FG2 − 9692 − 000		1	CABLE, DOWN LOAD ダウン　ロード束線	J707,9001
32	FG5 − 6297 − 000		1	PRECONDITIONING LAMP PCB UNIT 前露光回路基板	
32A	FF3 − 1166 − 000		1	CABLE, LAMP EXPOSURE 前露光束線	J8,409
33	FG6 − 3864 − 000		1	CCD UNIT CCDユニット	GP405,355,335,315 iR400E,400S iR330E,330S
	FG6 − 0439 − 000		1	CCD UNIT CCDユニット	GP40,35F,35,31F,31
33A	FF3 − 3024 − 000		1	CABLE, ADCLK ADCLK束線	GP405,355,335,315 iR400E,400S iR330E,330S J303,705
	FF3 − 2977 − 000		1	CABLE, ADCLK ADCLK束線	GP40,35,35F,31,31F J303,705
33B	FH2 − 6474 − 000		1	CABLE, FFC FFC束線	GP405,355,335,315 iR400E,400S iR330E,330S J301,706
	FH2 − 6470 − 000		1	CABLE, FFC FFC束線	GP40,35,35F,31,31F J301,706
33C	FA9 − 3610 − 000		1	LABEL, "CAUTION CONNECTOR" コネクタ注意ラベル	GP40,35,35F,31,31F
34	FH6 − 1475 − 000		1	MOTOR, STEPPING ステッピング　モータ	M3 J28
35	FH6 − 1481 − 000		2	FAN, COOLING 冷却ファン	FM12,13 J55,56
36	FH6 − 1488 − 000		3	FAN, COOLING 冷却ファン	FM14,15,16 J58,60,67
37	FH7 − 7386 − 000		1	SENSOR, DOCUMENT, 1 原稿検知センサ（1）	SD3 J703
38	FH7 − 7386 − 000		1	SENSOR, DOCUMENT, 1 原稿検知センサ（1）	AB SIZE SD4 J704 INCH SIZE SD4 J704
39	FH7 − 7388 − 000		2	SENSOR, DOCUMENT, 2 原稿検知センサ（2）	AB SIZE SD1,2 J712,711
	FH7 − 7388 − 000		1	SENSOR, DOCUMENT, 2 原稿検知センサ（2）	A SIZE SD2 J711 INCH SIZE SD1 J712
40	FH7 − 7394 − 000		1	PHOTO-INTERRUPTER フォトインタラプタ	PS1 J1
41	FH7 − 7426 − 000		1	SENSOR, HUMIDITY 湿度センサ	HUS1 J23

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
210 - 42	FS5 - 2309 - 000		2	SPRING, TENSION ヒッパリ バネ	
43	FS5 - 3622 - 000		1	PULLEY, DRIVE, 1 駆動プーリ (1)	
44	FS5 - 9210 - 000		2	SCREW,STEPPED,M4 段ビス	
45	FS6 - 2324 - 000		1	SPRING, TENSION ヒッパリ バネ	
46	RS5 - 8169 - 000		1	LABEL, "WARNING LASER" レーザ注意ラベル	
47	VS1 - 5057 - 002		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J409
48	VS1 - 5057 - 003		3	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J58,60,67
49	VS1 - 5057 - 003		2	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J55,56
50	VS1 - 6318 - 009		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J437
51	VS1 - 6318 - 017		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J404
52	VS1 - 6319 - 028		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J402
53	WT2 - 5565 - 000		3	CLAMP, CABLE ソクセン オサエ	
54	XA9 - 0591 - 000		1	SCREW,M3X8 タイト ネジ	
55	XF9 - 0659 - 000		1	BELT, TIMING タイミング ベルト	
56	XG9 - 0152 - 000		2	BEARING, BALL ベアリング	
501	XB1 - 1401 - 009		2	SCREW,MACH.,PAN HEAD,M4X10 ナベ ネジ	
502	XB1 - 2300 - 609		1	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
503	XB1 - 2300 - 609		1	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
504	XB1 - 2300 - 609		14	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
505	XB1 - 2400 - 407		1	SCREW,MACH.,TRUSS HEAD,M4X4 バインド ネジ	
506	XB1 - 2400 - 606		27	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
507	XB1 - 2400 - 609		10	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
508	XB1 - 2402 - 009		6	SCREW,MACH.,TRUSS HEAD,M4X20 バインド ネジ	
509	XB1 - 2402 - 009		4	SCREW,MACH.,TRUSS HEAD,M4X20 バインド ネジ	
510	XB2 - 7400 - 606		1	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	
511	XB2 - 7400 - 607		AR	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	
512	XB2 - 8401 - 009		2	SCREW,W/WASHER,M4X10 バネツキ バインド ネジ	
513	XB3 - 6400 - 800		AR	SCREW,RS,M4X8 RS タイト ネジ	
514	XB6 - 1300 - 608		4	SETSCREW,M3X6 ロッカク アナツキ トメネジ	
515	XB6 - 7300 - 609		4	SCREW,TP,M3X6 TP ネジ	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
210 - 516	XB6 − 7400 − 809		7	SCREW,TP,M4X8 TP ネジ	
517	XD2 − 1100 − 642		1	RING,E E リング	
518	XD2 − 1100 − 642		2	RING,E E リング	

FIGURE 250 MAIN DRIVE ASSEMBLY メイン駆動部


10A
(J49)
17
17
(CL2)
15
34
27
507
17
33
29
23
30
21
22
8
5
31
502
1
507
28
17
4
506
7
9
18
507
(SL3)
(J51)
13
10A
504
19
507
2
10C
10A
(J424)
(J50)
17
14
(CL4)
20
17
502
6
3
16
(PS14)
(J38)
25
507
(J40)
501
10A
35
24
507
26
(J50)
(CL1)
6
12
505
(J442)
(J424)
(J49)
(J50)
(J40)
(J38)
35
503
(J51)
(J73)
(J48)
10D
10
(J416)
(M1)
11
(J48,73)
(J416)
32
10B

NOTE:This assembly does not include the parts shown with key No.6,12 and 505.
注：このユニットにKey No. 6、12、505の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
250 -	FG6 — 0493 — 000		1	MAIN DRIVE ASSEMBLY メイン駆動部	
1	FB1 — 0138 — 000		1	DRUM, CLUTCH DRIVE, 1 クラッチ　ドラム (1)	
2	FB1 — 6762 — 000		1	COUPLING, CLEANING クリーナ　カップリング	
3	FB1 — 6767 — 000		1	MOUNT, FLYWHEEL フライホイール台	
4	FB1 — 8014 — 000		1	CAM, PLATE 中板カム	
5	FB2 — 4480 — 000		1	RING, RACHET CONTROL 制御リング	
6	FB3 — 2331 — 000		1	SPACER スペーサ	SEE NOTE
7	FB3 — 2576 — 000		1	SUPPORT, SLEEVE スリーブ　サポート	
8	FB4 — 2971 — 000		1	SHAFT, ONE-WAY ワンウェイ軸	
9	FB4 — 2975 — 000		1	COUPLING, DRUM ドラム　カップリング	
10	FG2 — 9530 — 000		1	CABLE, MAIN DRIVE メイン駆動束線	J38,40,48～51,73 J416,424,442
10A	VS1 — 5057 — 002		4	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J40,49～51
10B	VS1 — 5057 — 009		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J416
10C	VS1 — 6319 — 024		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J424
10D	WT2 — 5178 — 000		1	CLIP, CABLE ロッキング　ワイヤ　サドル	
11	FH6 — 1472 — 000		1	MOTOR, DC24V DCモータ	M1 J48,73
12	FH7 — 5768 — 000		1	CLUTCH, ELECTROMAGNETIC 電磁クラッチ	SEE NOTE CL1 J50
13	FH7 — 5774 — 000		1	SOLENOID ソレノイド	SL3 J51
14	FH7 — 5776 — 000		1	CLUTCH, ELECTROMAGNETIC 電磁クラッチ	CL4 J40
15	FH7 — 5781 — 000		1	CLUTCH, ELECTROMAGNETIC 電磁クラッチ	CL2 J49
16	FH7 — 7394 — 000		1	PHOTO-INTERRUPTER フォトインタラプタ	PS14 J38
17	FS1 — 1509 — 000		6	BUSHING ブッシング	
18	FS5 — 2310 — 000		1	SPRING, COMPRESSION アッシュク　バネ	
19	FS5 — 2400 — 000		1	SPRING, COMPRESSION アッシュク　バネ	
20	FS5 — 3456 — 000		1	PULLEY, DEV. CLUTCH, 32T 32T　現像クラッチ　プーリ	
21	FS5 — 6585 — 000		1	SPACER スペーサ	
22	FS6 — 0535 — 000		1	GEAR, 36T 36T　ギア	
23	FS6 — 2788 — 000		1	SPRING, COMPRESSION アッシュク　バネ	
24	FS7 — 0067 — 000		1	GEAR, 67T 67T　ギア	
25	FS7 — 0068 — 000		1	GEAR, 20T 20T　ギア	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
250 — 26	FS7 — 0069 — 000		1	GEAR, 22T 22T ギア	
27	FS7 — 0071 — 000		1	GEAR, 17T 17T ギア	
28	FS7 — 0072 — 000		1	GEAR, 27T 27T ギア	
29	FS7 — 0075 — 000		1	GEAR, 27T 27T ギア	
30	RS1 — 1029 — 000		1	BUSHING ブッシング	
31	RS1 — 2111 — 000		1	SPRING, CLUTCH クラッチ バネ	
32	XA9 — 0626 — 000		15	SCREW,RS,M3X6 RS タイト ネジ	
33	XD9 — 0131 — 000		7	RING,E E リング	
34	XD9 — 0137 — 000		21	RING,E E リング	
35	XG9 — 0250 — 000		2	BEARING, BALL ボール ベアリング	
501	XB6 — 2300 — 609		2	SETSCREW,M3X6 ロッカク アナツキ トメネジ	
502	XB6 — 2400 — 609		3	SETSCREW,M4X6 ロッカク アナツキ トメネジ	
503	XB6 — 7400 — 809		4	SCREW,TP,M4X8 TP ネジ	
504	XD1 — 1106 — 234		1	SHIM ヒョウジュン ワッシャ	
505	XD2 — 2100 — 802		1	RING,GRIP グリップ リング	SEE NOTE
506	XD3 — 1200 — 102		1	PIN,SPRING スプリング ピン	
507	XD3 — 2200 — 142		13	PIN,DOWEL ヘイコウ ピン	

FIGURE 280 FIXING DRIVE ASSEMBLY 定着駆動部

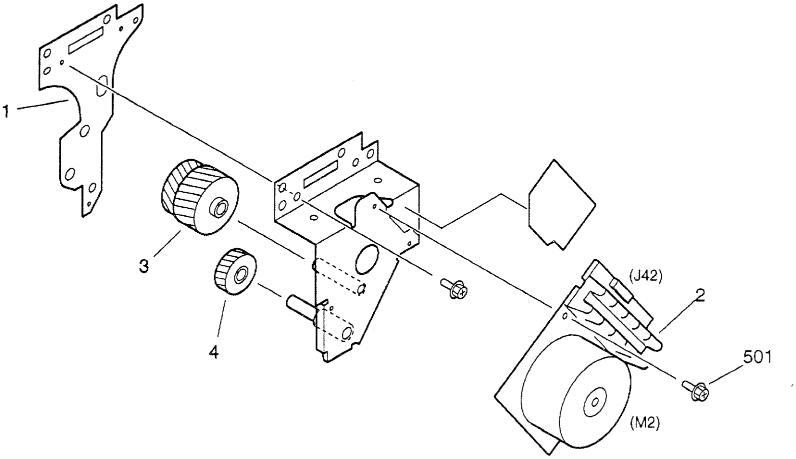


FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
280 -	FG6 – 0495 – 000		1	FIXING DRIVE ASSEMBLY 定着駆動部	
1	FB4 – 2985 – 000		1	PLATE, DRIVE, LOWER 駆動板（下）	
2	FH6 – 1474 – 000		1	MOTOR, DC24V DCモータ	M2 J42
3	FS7 – 0056 – 000		1	GEAR, 32T/72T 32T／72T ギア	
4	FS7 – 0057 – 000		1	GEAR, 24T 24T ギア	
501	XB3 – 6300 – 609		6	SCREW,RS,M3X6 RS タイト ネジ	

FIGURE 300 CASSETTE カセット

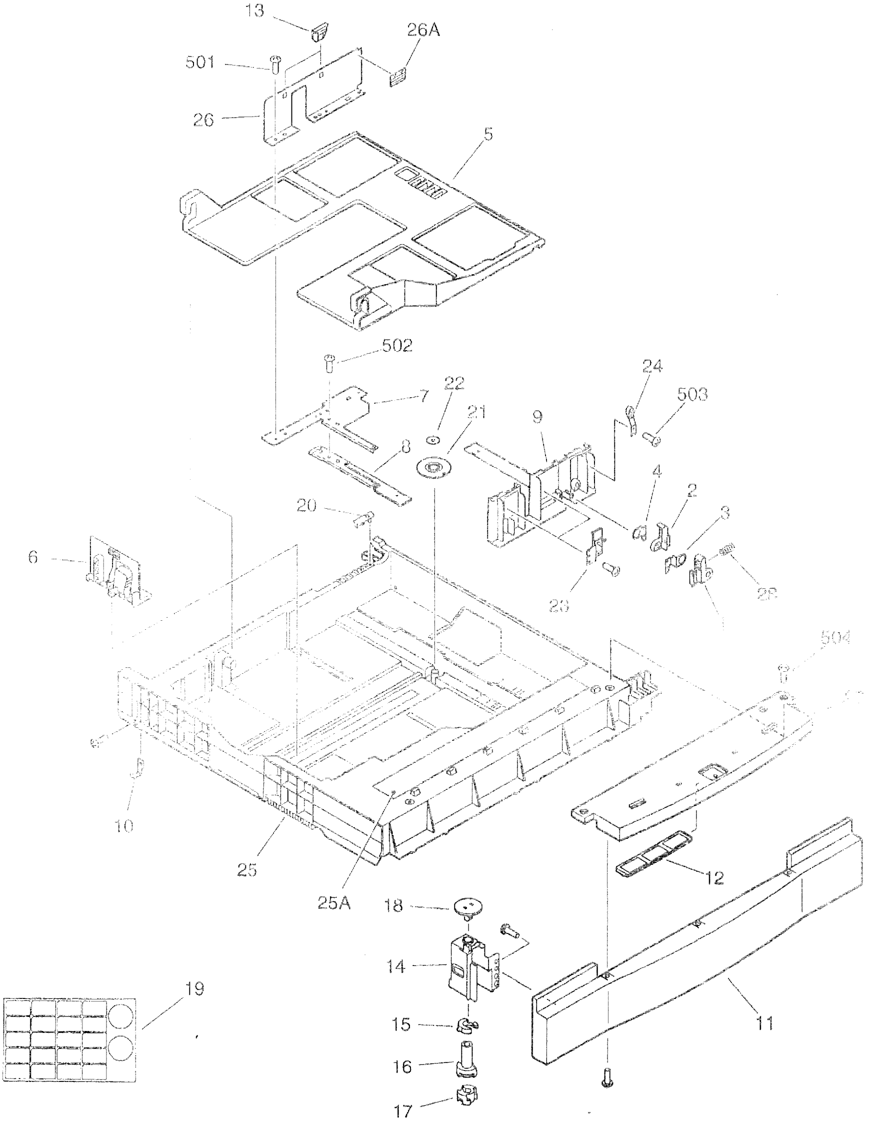
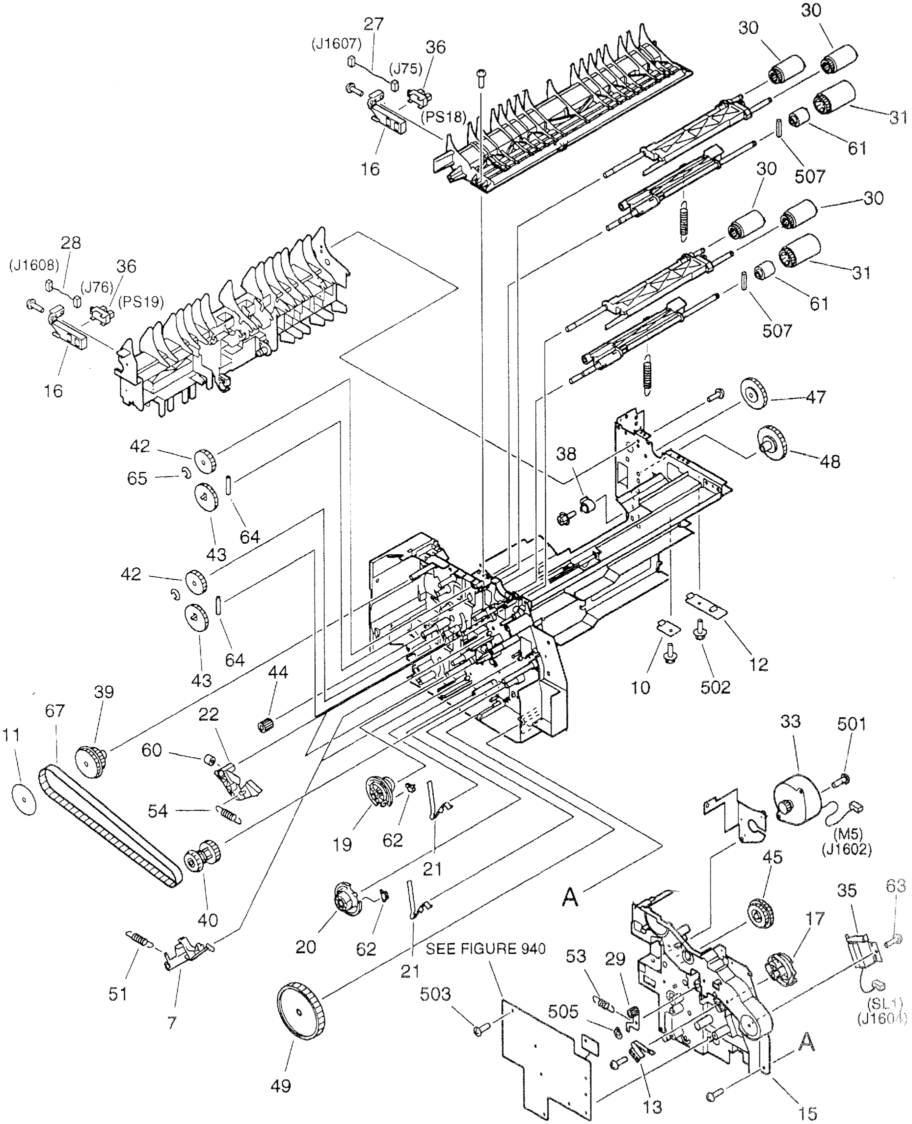

13
26A
501
26
5
502
24
503
22
7
21
9
8
4
2
3
20
6
28
23
504
10
25
25A
12
18
14
19
11
15
16
17

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
300 -	NPN		RF	CASSETTE カセット	
1	FA9 – 3311 – 000		1	BLOCK, STOP, 1 ストッパ ブロック (1)	
2	FA9 – 3312 – 000		1	BLOCK, STOP, 2 ストッパ ブロック (2)	
3	FA9 – 3313 – 000		1	PLATE, STOP, 1 ストッパ板 (1)	
4	FA9 – 3314 – 000		1	PLATE, STOP, 2 ストッパ板 (2)	
5	FB3 – 2922 – 000		1	PLATE, PAPER LIFTING 中板	
6	FB3 – 2923 – 020		1	PLATE, PAPER SIZE END 後端規制板	
7	FB3 – 2926 – 000		1	PLATE, SIDE END サイド規制基台	
8	FB3 – 2927 – 000		1	RACK, MANUAL ラック	
9	FB3 – 2928 – 000		1	PLATE, SIZE END, FRONT サイド規制板 (前)	
10	FB3 – 2930 – 000		2	PLATE, STOP ストッパ プレート	
11	FB3 – 2931 – 000		1	COVER, CASSETTE カセット カバー	
12	FB3 – 2933 – 000		1	PLATE, SIZE サイズ プレート	
13	FB3 – 2934 – 000		2	CLAW, SIDE サイド爪	
14	FB3 – 2940 – 000		1	HINGE, CAM カム ヒンジ	
15	FB3 – 2941 – 000		1	CAM, SIZE SENSOR, 1 サイズ検知カム (1)	
16	FB3 – 2942 – 000		1	CAM, SIZE SENSOR, 2 サイズ検知カム (2)	
17	FB3 – 2943 – 000		1	CAM, SIZE SENSOR, 3 サイズ検知カム (3)	
18	FB3 – 2944 – 000		1	KNOB, CASSETTE SIZE SENSOR カセット サイズ検知つまみ	
19	FB3 – 2952 – 000		1	LABEL, "CASSETTE SIZE" カセット サイズ ラベル	
20	FB3 – 2953 – 000		1	BLOCK, SLIDER スライダ	
21	FB3 – 2955 – 000		1	GEAR, 20T 20T ギア	
22	FB3 – 2956 – 000		1	RING, GEAR STOP ギア押え	
23	FF5 – 4491 – 000		2	BLOCK, SIDE, 2 サイド コマ (2)	
24	FF5 – 4548 – 030		1	BLOCK, SIDE, 1 サイド コマ (1)	
25	FF5 – 4567 – 000		1	BODY, CASSETTE カセット桶	LARGE SIZE
	FF5 – 4568 – 000		1	BODY, CASSETTE カセット桶	MIDDLE SIZE
25A	FB3 – 2951 – 000		1	LABEL, "PAPER SUPPLY" 用紙補給ラベル	
26	FF5 – 4569 – 020		1	PLATE, SIDE END, REAR サイド規制板 (後)	
26A	FS6 – 8116 – 000		1	LABEL, "PAPER HEIGHT" 積載制限ラベル	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
300 – 27	FF5 – 7901 – 000		1	LATCH, CASSETTE カセット把手	
28	FS5 – 2650 – 000		1	SPRING, COMPRESSION アッシュク バネ	
501	XB1 – 2300 – 409		5	SCREW,MACH.,TRUSS HEAD,M3X4 バインド ネジ	
502	XB1 – 2300 – 609		2	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
503	XB4 – 7300 – 609		3	SCREW,TAPPING,TRUSS HEAD,M3X6 バインド タッピン ネジ	
504	XB4 – 7401 – 209		6	SCREW,TAPPING,TRUSS HEAD,M4X12 バインド タッピン ネジ	

FIGURE 310 PAPER PICK-UP ASSEMBLY(1/2)
給紙部(1/2)


27
(J1607)
36
(J75)
(PS18)
16
30
30
31
61
507
30
30
31
61
507
28
(J1608)
36
(J76)
(PS19)
16
47
48
38
42
65
64
43
42
64
43
12
10
502
44
39
67
11
22
60
54
40
19
62
21
20
62
21
51
7
49
33
501
(M5)
(J1602)
45
A
35
63
17
SEE FIGURE 940
53
29
503
505
(SL1)
(J1604)
A
13
15

NOTE:This assembly includes the assembly shown in Figure 940.
注：このユニットはFigure　940のユニットを含みます。

# FIGURE 310 PAPER PICK-UP ASSEMBLY(2/2)
給紙部(2/2)

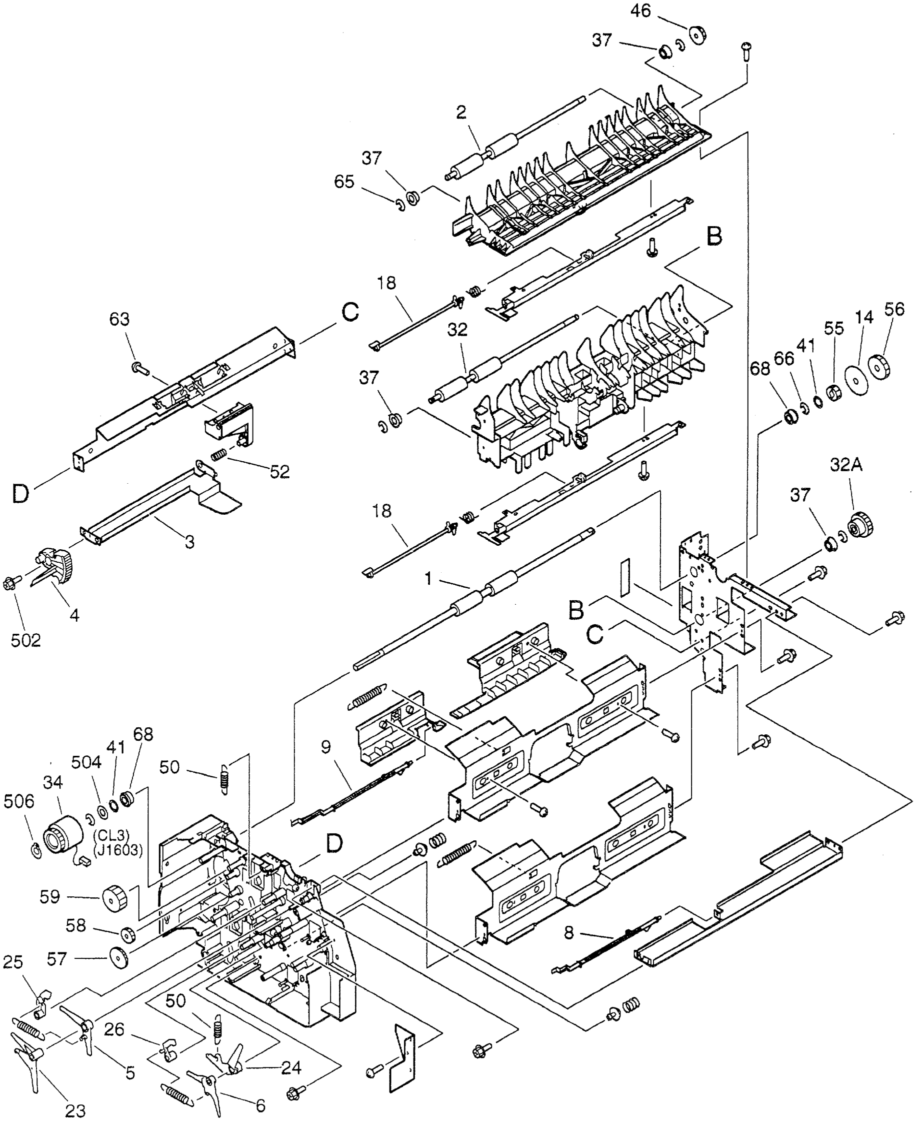
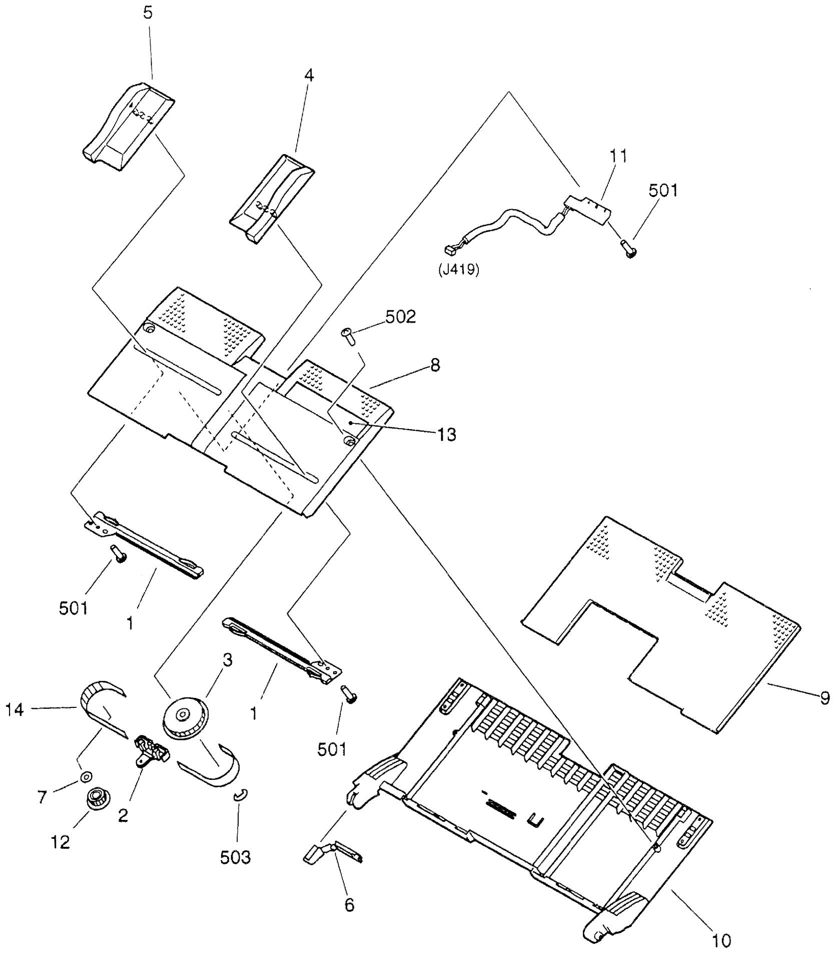

46
37
2
37
65
B
18
63
C
32
37
68
66
41
55
14
56
52
D
32A
37
18
3
1
4
502
B
C
68
41
504
34
506
50
9
(CL3)
(J1603)
D
59
58
57
25
50
26
5
24
23
6
8

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
310 –	FG6 – 0451 – 000		1	PAPER PICK-UP ASSEMBLY 給紙部	SEE NOTE
1	FB3 – 2849 – 000		1	ROLLER, VERTICAL PATH 縦パス ローラ	
2	FB3 – 2850 – 000		1	ROLLER, PAPER FEED, UPPER 搬送ローラ（上）	
3	FB3 – 2855 – 000		1	PLATE, PAPER SUPPORT リフタ板	
4	FB3 – 2856 – 000		1	GEAR, RATCHET ラチェット ギア	
5	FB3 – 2863 – 000		1	LEVER, LIFTER, UPPER リフタ レバー（上）	
6	FB3 – 2864 – 000		1	LEVER, LIFTER, LOWER リフタ レバー（下）	
7	FB3 – 2868 – 020		2	CLAW, LIFTER LOCK リフタ ロック爪	
8	FB3 – 2880 – 000		1	FLAG, PAPER SENSOR, UPPER 紙検知センサ フラグ（上）	
9	FB3 – 2881 – 000		1	FLAG, PAPER SENSOR, LOWER 紙検知センサ フラグ（下）	
10	FB3 – 2894 – 020		1	GUIDE, LOWER CASSETTE カセット ガイド（下）	
11	FB3 – 2896 – 000		1	PLATE, BELT SUPPORT ベルト押え板	
12	FB3 – 2897 – 020		1	GUIDE, UPPER CASSETTE カセット ガイド（上）	
13	FB3 – 2898 – 020		1	SPRING, LEAF 板バネ	
14	FB4 – 2815 – 000		1	ROLLER, VERTICAL PATH 縦パス コロ	
15	FB4 – 2816 – 000		1	COVER, FRAME フレーム カバー	
16	FB4 – 2817 – 000		2	MOUNT, SENSOR センサ取り付け台	
17	FB4 – 2987 – 000		1	CAM, PAPER PICK-UP ROLLER 給紙ローラ カム	
18	FB4 – 3343 – 000		2	FLAG, RETRY SENSOR リトライ センサ フラグ	
19	FB4 – 5347 – 000		1	CAM, LIFT UP, UPPER リフト アップ カム（上）	
20	FB4 – 5348 – 000		1	CAM, LIFT UP, LOWER リフト アップ カム（下）	
21	FB4 – 5349 – 000		2	SPRING, LEAF 板バネ	
22	FB4 – 5350 – 000		2	CLAW, LIFTER ARM リフタ アーム爪	
23	FB4 – 5364 – 000		1	ARM, LIFTER, UPPER リフタ アーム（上）	
24	FB4 – 5365 – 000		1	ARM, LIFTER, LOWER リフタ アーム（下）	
25	FB4 – 5366 – 000		1	LEVER, PICK LOCK, UPPER ピック ロック レバー（上）	
26	FB4 – 5367 – 000		1	LEVER, PICK LOCK, LOWER ピック ロック レバー（下）	
27	FF3 – 2974 – 000		1	CABLE, UPPER RETRY SENSOR リトライ センサ束線（上）	J75,1607
28	FF3 – 2975 – 000		1	CABLE, LOWER RETRY SENSOR リトライ センサ束線（下）	J76,1608
29	FF5 – 4524 – 020		1	PLATE, TENSION テンショナ	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
310 - 30	FF5 – 4552 – 020		4	ROLLER, PAPER PICK-UP 給紙ローラ	
31	FF5 – 4634 – 020		2	ROLLER, PAPER SEPARATION 分離ローラ	
32	FF9 – 1614 – 000		1	ROLLER, PAPER FEED, LOWER 搬送ローラ (下)	
32A	FS6 – 0573 – 000		1	GEAR, 28T 28T ギア	
33	FH6 – 1477 – 000		1	MOTOR, STEPPING ステッピング モータ	M5 J1602
34	FH7 – 5770 – 000		1	CLUTCH, ELECTROMAGNETIC 電磁クラッチ	CL3 J1603
35	FH7 – 5772 – 000		1	SOLENOID ソレノイド	SL1 J1604
36	FH7 – 7394 – 000		2	PHOTO-INTERRUPTER フォトインタラプタ	PS18,19 J75,76
37	FS1 – 1512 – 000		4	BUSHING ブッシング	
38	FS5 – 1589 – 000		1	BUSHING ブッシング	
39	FS5 – 3619 – 000		1	GEAR PULLEY, 28T/50T 28T／50T ギア プーリ	
40	FS5 – 3620 – 000		1	GEAR PULLEY, 32T/50T 32T／50T ギア プーリ	
41	FS5 – 6487 – 000		2	SHIM ワッシャ	
42	FS6 – 0564 – 000		2	GEAR, 35T 35T ギア	
43	FS6 – 0565 – 000		2	GEAR, 42T 42T ギア	
44	FS6 – 0569 – 000		1	GEAR, 14T 14T ギア	
45	FS6 – 0570 – 000		1	GEAR, 35T/44T 35T／44T ギア	
46	FS6 – 0572 – 000		1	GEAR, 16T 16T ギア	
47	FS6 – 0574 – 000		1	GEAR, 38T 38T ギア	
48	FS6 – 0575 – 000		1	GEAR, 42T 42T ギア	
49	FS6 – 0576 – 000		1	GEAR, 86T 86T ギア	
50	FS6 – 2325 – 000		2	SPRING, TENSION ヒッパリ バネ	
51	FS6 – 2328 – 020		2	SPRING, TENSION ヒッパリ バネ	
52	FS6 – 2330 – 000		1	SPRING, COMPRESSION アッシュク バネ	
53	FS6 – 2331 – 000		1	SPRING, TENSION ヒッパリ バネ	
54	FS6 – 2900 – 000		2	SPRING, TENSION ヒッパリ バネ	
55	FS7 – 0100 – 000		1	GEAR, 16T 16T ギア	
56	FS7 – 0101 – 000		1	GEAR, 28T 28T ギア	
57	FS7 – 0103 – 000		1	GEAR, 35T 35T ギア	
58	FS7 – 0104 – 000		1	GEAR, 24T 24T ギア	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
310 - 59	FS7 - 0105 - 000		1	GEAR, 35T 35T ギア	
60	RB1 - 6539 - 000		2	DAMPER ダンパ	
61	RB1 - 6588 - 000		2	LIMITER, TORQUE トルク リミッタ	
62	RB1 - 6592 - 000		2	GEAR, 3T 3T ギア	
63	XA9 - 0591 - 000		27	SCREW,M3X8 タイト ネジ	
64	XD9 - 0104 - 000		3	PIN,DOWEL ヘイコウ ピン	
65	XD9 - 0131 - 000		8	RING,E E リング	
66	XD9 - 0137 - 000		2	RING,E E リング	
67	XF9 - 0568 - 000		1	BELT, TIMING タイミング ベルト	
68	XG3 - 8012 - 355		2	BEARING, BALL ボール ベアリング	
501	XB1 - 2300 - 409		2	SCREW,MACH.,TRUSS HEAD,M3X4 バインド ネジ	
502	XB3 - 6300 - 800		16	SCREW,RS,M3X8 RS タイト ネジ	
503	XB4 - 7300 - 607		1	SCREW,TAPPING,TRUSS HEAD,M3X6 バインド タッピン ネジ	
504	XD1 - 1108 - 225		1	SHIM ヒョウジュン ワッシャ	
505	XD2 - 2100 - 402		1	RING,GRIP グリップ リング	
506	XD2 - 2100 - 802		1	RING,GRIP グリップ リング	
507	XD3 - 1200 - 122		4	PIN,SPRING スプリング ピン	

FIGURE 326 MULTI FEEDER TRAY ASSEMBLY マルチ手差しトレイ部


5
4
11
501
(J419)
502
8
13
501
1
9
3
14
1
501
7
2
503
12
6
10

NOTE:This assembly does not include the part shown with key No.13.
注：このユニットにKey No. 13の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
326 -	FG6 – 0575 – 000		1	MULTI FEEDER TRAY ASSEMBLY マルチ手差しトレイ部	
1	FB1 – 8619 – 000		2	RACK ラック　バン	
2	FB1 – 8621 – 000		1	PLATE, LOCK ベルト　ロック　イタ	
3	FB1 – 8625 – 000		1	GEAR, 18T 18T　ギア	
4	FB3 – 2825 – 000		1	SIDE PLATE, SIZE, FRONT サイド規制板（前）	
5	FB3 – 2826 – 000		1	SIDE PLATE, SIZE, REAR サイド規制板（後）	
6	FB3 – 2832 – 000		1	GUIDE, MULTI FEEDER CABLE マルチ束線ガイド	
7	FB3 – 2836 – 000		1	RING, BELT STOP ベルト押え	
8	FB4 – 3264 – 000		1	TRAY, MULTI FEED マルチ　トレイ	
9	FB4 – 3265 – 000		1	TRAY, SLIDE スライド　トレイ	
10	FF5 – 7086 – 000		1	COVER, MULTI FEED TRAY マルチ　トレイ　カバー	
11	FG5 – 6289 – 000		1	MULTI PAPER SIZE PCB ASSEMBLY マルチ紙サイズ検知回路基板	J419
12	FS5 – 3177 – 000		1	PULLEY, IDLER アイドラ　プーリ	
13	FS5 – 8612 – 000		1	LABEL, SIZE サイズ　ラベル	SEE NOTE AB SIZE
	FS5 – 8613 – 000		1	LABEL, SIZE サイズ　ラベル	SEE NOTE AB/INCH SIZE
	FS5 – 8614 – 000		1	LABEL, SIZE サイズ　ラベル	SEE NOTE A/INCH SIZE
	FS5 – 8615 – 000		1	LABEL, SIZE サイズ　ラベル	SEE NOTE A SIZE
14	XF9 – 0393 – 000		1	BELT, TIMING タイミング　ベルト	
501	XB4 – 7300 – 609		3	SCREW,TAPPING,TRUSS HEAD,M3X6 バインド　タッピン　ネジ	
502	XB4 – 7401 – 007		2	SCREW,TAPPING,TRUSS HEAD,M4X10 バインド　タッピン　ネジ	
503	XD2 – 2100 – 502		1	RING,GRIP グリップ　リング	

FIGURE 330 PAPER FEEDER ASSEMBLY 搬送部

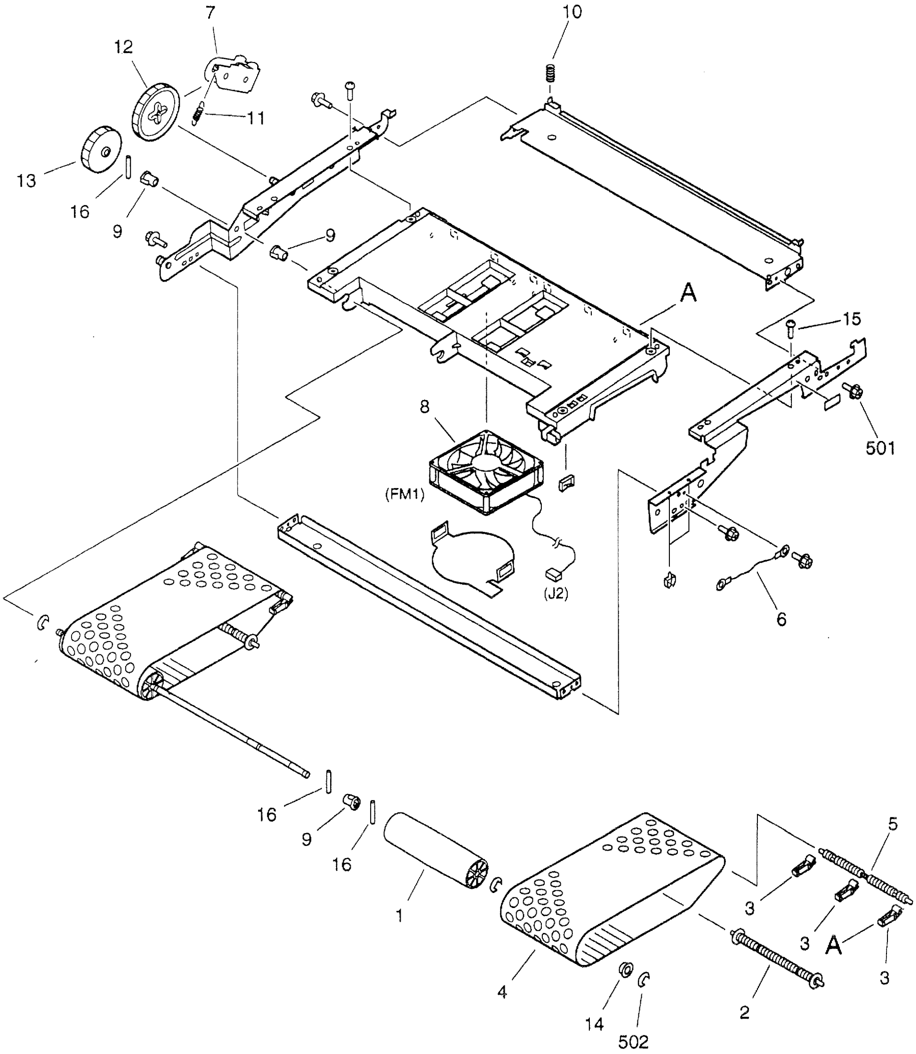
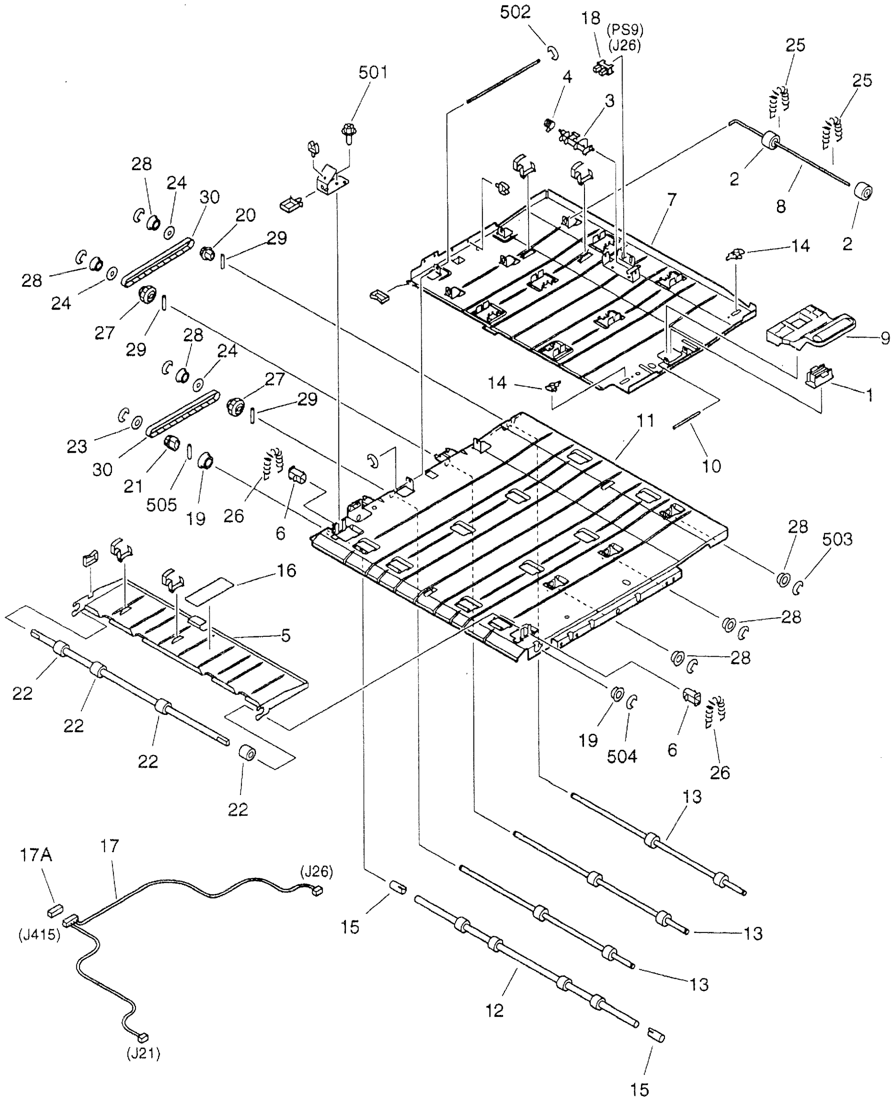

7
10
12
11
13
16
9
9
A
15
8
501
(FM1)
(J2)
6
5
16
9
16
1
3
3
A
3
4
14
502
2

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
330 -	FG6 — 0457 — 000		1	PAPER FEEDER ASSEMBLY 搬送部	
1	FB3 — 3105 — 000		2	PULLEY, PAPER FEED 搬送プーリ	
2	FB3 — 3107 — 000		2	ROLLER, BELT IDLER, 1 従動コロ (1)	
3	FB4 — 2827 — 000		6	ARM, ROLLER HOLDER コロ受けアーム	
4	FB4 — 2830 — 000		2	BELT, PAPER FEED 搬送ベルト	
5	FB4 — 2832 — 000		2	ROLLER, BELT IDLER, 2 従動コロ (2)	
6	FF3 — 2994 — 000		1	CABLE, GROUNDING アース束線	
7	FF5 — 6932 — 000		1	PLATE, SWING 揺動板	
8	FH6 — 1480 — 000		1	FAN, PAPER FEED 搬送ファン	FM1 J2
9	FS5 — 1590 — 000		3	BUSHING ブッシング	
10	FS6 — 2342 — 000		1	SPRING, COMPRESSION アッシュク バネ	
11	FS6 — 2783 — 000		1	SPRING, TENSION ヒッパリ バネ	
12	FS7 — 0054 — 000		1	GEAR, 56T 56T ギア	
13	FS7 — 0055 — 000		1	GEAR, 41T 41T ギア	
14	RS5 — 1193 — 000		1	BUSHING ブッシング	
15	XA9 — 0870 — 000		4	SCREW,M4X10 タイト ネジ	
16	XD9 — 0121 — 000		3	PIN, DOWEL ヘイコウ ピン	
501	XB3 — 6300 — 609		5	SCREW,RS,M3X6 RS タイト ネジ	
502	XD2 — 1100 — 502		3	RING,E E リング	

FIGURE 335 LOWER PAPER FEEDER ASSEMBLY
下搬送部

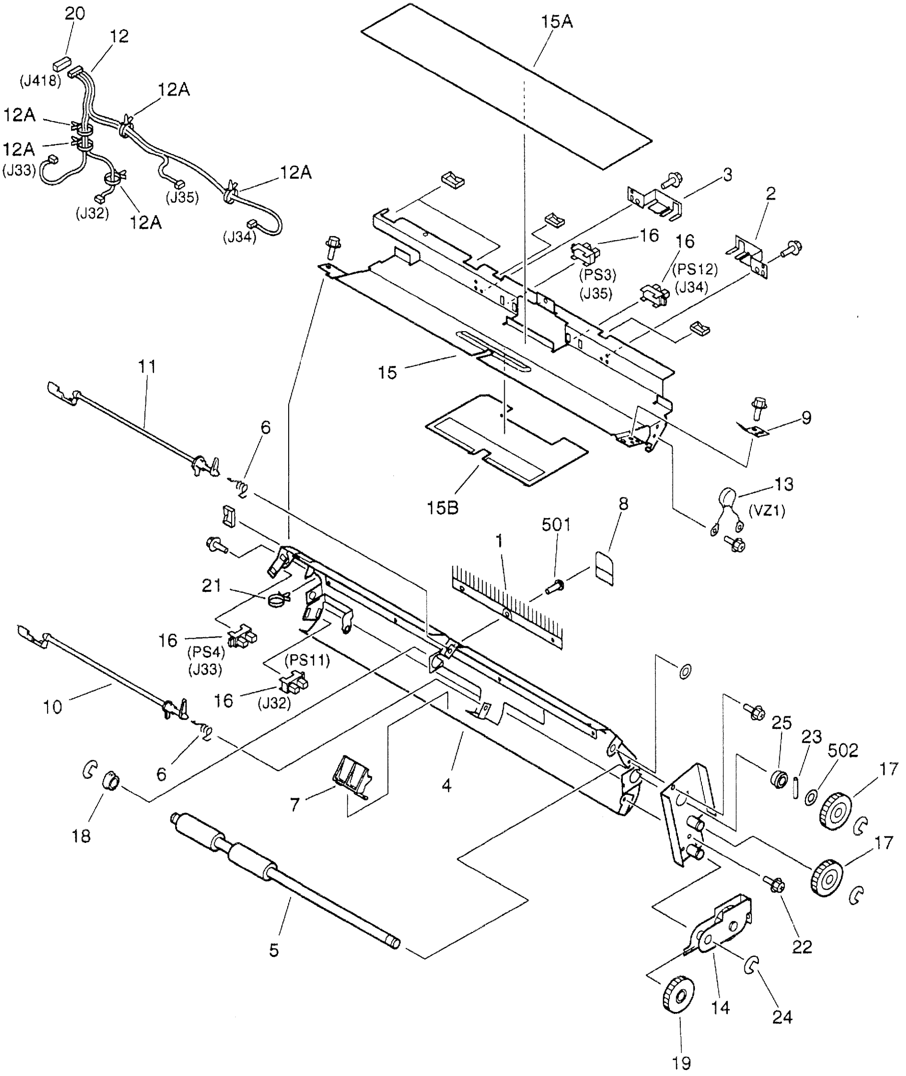

502
18
(PS9)
(J26)
25
25
501
4
3
2
8
2
28
24
30
20
29
7
14
2
28
24
27
29
28
24
9
14
1
27
29
23
30
21
505
19
26
6
11
10
16
5
28
503
28
28
22
22
22
22
19
504
6
26
13
17A
17
(J26)
(J415)
15
13
13
12
(J21)
15

NOTE:This assembly does not include the parts shown with key No.9 and 10.
注：このユニットにKey No. 9、10の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
335 -	FG6 – 0482 – 000		1	LOWER PAPER FEEDER ASS'Y 下搬送部	
1	FB3 – 2997 – 000		1	MAGNET CATCH マグネット キャッチ	
2	FB3 – 3162 – 000		6	ROLLER, EXTERNAL DELIVERY, 1 外排紙コロ (1)	
3	FB4 – 2934 – 000		1	FLAG, DUPLEXING P. FEED SENSOR 両面搬送センサ フラッグ	
4	FB4 – 2935 – 000		1	SPRING, TORSION ネジリ バネ	
5	FB4 – 2936 – 000		1	GUIDE, PAPER FEED, UPPER, 2 搬送上ガイド (2)	
6	FB4 – 2939 – 000		2	BUSHING, INLET FEED 搬送入口軸受	
7	FB4 – 2940 – 000		1	GUIDE, PAPER FEED, UPPER, 1 搬送上ガイド (1)	
8	FB4 – 2941 – 000		3	SHAFT, PAPER FEED ROLLER 搬送コロ軸	
9	FB4 – 2943 – 000		1	HANDLE, PAPER FEEDER 搬送把手	SEE NOTE
10	FB4 – 2944 – 000		1	SHAFT, HANDLE 把手軸	SEE NOTE
11	FB4 – 2945 – 000		1	GUIDE, PAPER FEED, LOWER 搬送下ガイド	
12	FB4 – 2946 – 000		1	ROLLER, DUPLEXING FEEDER, 1 両面搬送ローラ (1)	
13	FB4 – 2947 – 000		3	ROLLER, DUPLEXING FEEDER, 2 両面搬送ローラ (2)	
14	FB4 – 2955 – 000		2	SPACER, GUIDE ガイド スペーサ	
15	FB4 – 2957 – 000		2	COLLAR, INLET FEED 搬送入口カラー	
16	FB4 – 3304 – 000		1	LABEL, INSTRUCTION 搬送ガイド ラベル	
17	FF3 – 2996 – 000		1	CABLE, DUPLEXING FEEDER 両面搬送束線	J21,26,415
17A	VS1 – 5057 – 006		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J415
18	FH7 – 7394 – 000		1	PHOTO-INTERRUPTER フォトインタラプタ	PS9 J26
19	FS1 – 1189 – 000		2	BUSHING ブッシング	
20	FS5 – 3640 – 000		1	PULLEY, 22T 22T プーリ	
21	FS5 – 3641 – 000		1	PULLEY, 22T 22T プーリ	
22	FS5 – 6587 – 000		4	ROLLER, INLET PAPER FEEDER 搬送入口コロ	
23	FS5 – 6589 – 000		1	FLANGE, PULLEY, 1 プーリ フランジ (1)	
24	FS5 – 6590 – 000		3	FLANGE, PULLEY, 2 プーリ フランジ (2)	
25	FS6 – 2810 – 000		6	SPRING, TENSION ヒッパリ バネ	
26	FS6 – 2811 – 000		2	SPRING, TENSION ヒッパリ バネ	
27	FS7 – 0093 – 000		2	GEAR, 20T/PULLEY, 22T 20T ギア／22T プーリ	
28	RS5 – 1058 – 000		6	BUSHING ブッシング	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
335 - 29	XD9 - 0103 - 000		3	PIN,DOWEL ヘイコウ ピン	
30	XF9 - 0661 - 000		2	BELT, TIMING タイミング ベルト	
501	XB3 - 6300 - 609		1	SCREW,RS,M3X6 RS タイト ネジ	
502	XD2 - 1100 - 242		2	RING,E E リング	
503	XD2 - 1100 - 502		6	RING,E E リング	
504	XD2 - 1100 - 642		2	RING,E E リング	
505	XD3 - 2300 - 122		1	PIN,DOWEL ヘイコウ ピン	

FIGURE 341 REGISTRATION FRONT GUIDE ASSEMBLY
レジスト前ガイド部

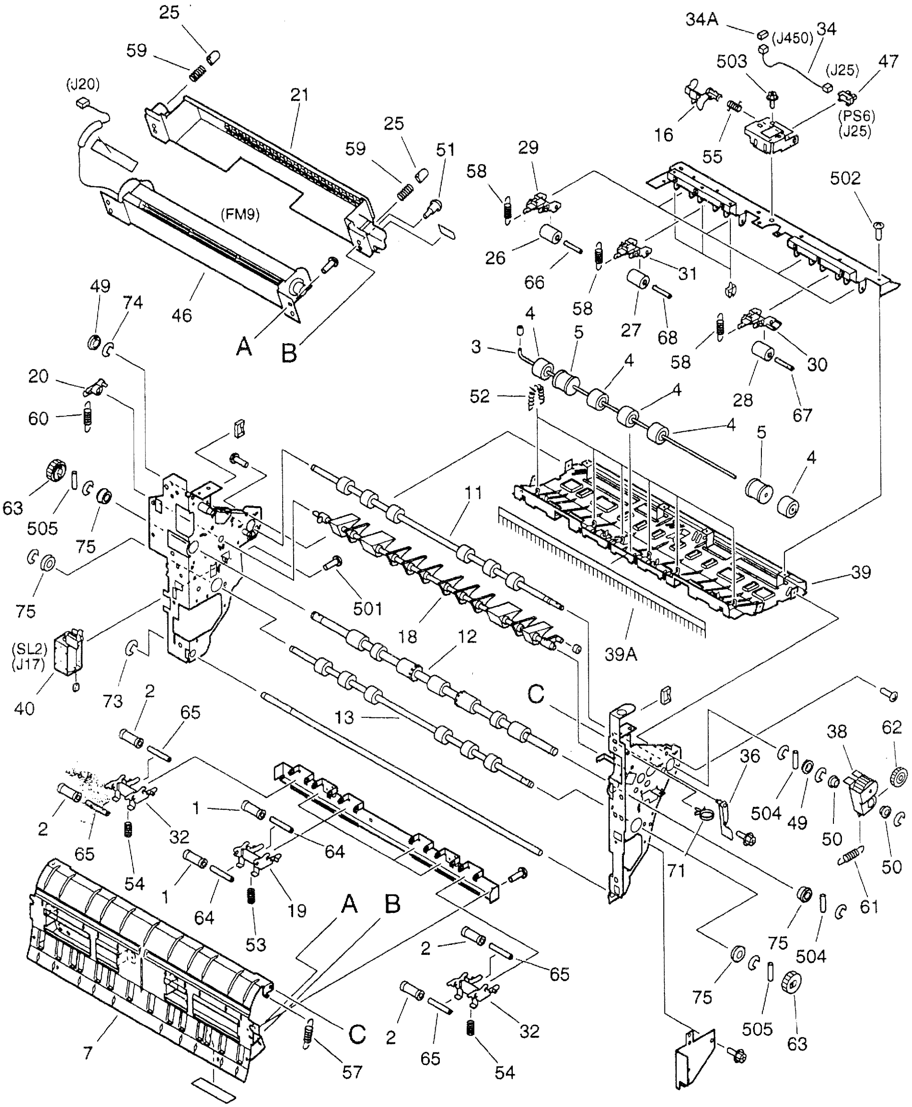

20
12
(J418)
12A
12A
12A
12A
(J33)
(J32)
12A
(J35)
12A
(J34)
15A
3
2
16
(PS3)
(J35)
16
(PS12)
(J34)
15
11
6
9
13
(VZ1)
15B
8
501
1
21
16
(PS4)
(J33)
(PS11)
16
(J32)
10
6
4
7
18
25
23
502
17
17
5
22
14
24
19

NOTE:This assembly does not include the part shown with key No.20.
注：このユニットにKey No. 20の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
341 -	FG6 – 0591 – 000		1	REGIST. FRONT GUIDE ASSEMBLY レジスト前ガイド部	
1	FB3 – 2647 – 020		1	ELIMINATOR, STATIC CHARGE 除電針	
2	FB3 – 2648 – 000		1	PLATE, SENSOR, FRONT センサ板（前）	
3	FB3 – 2649 – 000		1	PLATE, SENSOR, REAR センサ板（後）	
4	FB3 – 2651 – 030		1	GUIDE, REGISTRATION, LOWER レジスト前ガイド（下）	
5	FB3 – 2652 – 000		1	ROLLER, REGISTRATION レジスト　ローラ	
6	FB3 – 2658 – 000		2	SPRING, TORSION ネジリ　バネ	
7	FB3 – 2968 – 000		1	SUPPORT, SENSOR センサ押え	
8	FB4 – 3312 – 000		1	SHEET, REGIST. FRONT, LARGE レジ前シート（大）	
9	FB4 – 3314 – 000		1	SPRING, LEAF 板バネ	
10	FB4 – 3341 – 000		1	ARM, SENSOR, 1 センサ　アーム　(1)	
11	FB4 – 3342 – 000		1	ARM, SENSOR, 2 センサ　アーム　(2)	
12	FF3 – 1172 – 000		1	CABLE, REGISTRATION, FRONT レジスト束線（前）	J32〜35,418
12A	WT2 – 5041 – 000		5	CLAMP, CABLE ケーブル　クランプ	
13	FF3 – 1173 – 000		1	VARISTOR UNIT バリスタ　ユニット	VZ1
14	FF5 – 4525 – 000		1	PLATE, SWING 揺動板	
15	FF5 – 6996 – 000		1	GUIDE, REGISTRATION, UPPER レジスト前ガイド（上）	
15A	FB3 – 2653 – 000		1	SHEET, UPPER GUIDE 上ガイド　シート	
15B	FB4 – 3311 – 000		1	SHEET, LOWER GUIDE 下ガイド　シート	
16	FH7 – 7312 – 000		4	PHOTO-INTERRUPTER フォトインタラプタ	PS3,4,11,12 J35,33,32,34
17	FS2 – 0441 – 000		2	GEAR, 28T 28T　ギア	
18	FS5 – 1594 – 020		1	BUSHING ブッシング	
19	FS7 – 0058 – 000		1	GEAR, 28T 28T　ギア	
20	VS1 – 5057 – 012		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	SEE NOTE J418
21	WT2 – 5026 – 000		1	CLIP, CABLE クランプ	
22	XA9 – 0626 – 000		7	SCREW,RS,M3X6 RS　タイト　ネジ	
23	XD9 – 0108 – 000		1	PIN,DOWEL ヘイコウ　ピン	
24	XD9 – 0137 – 000		4	RING,E E　リング	
25	XG3 – 8012 – 355		1	BEARING, BALL ボール　ベアリング	
501	XB2 – 7300 – 607		1	SCREW,W/WASHER,M3X6 バネツキ　バインド　ネジ	

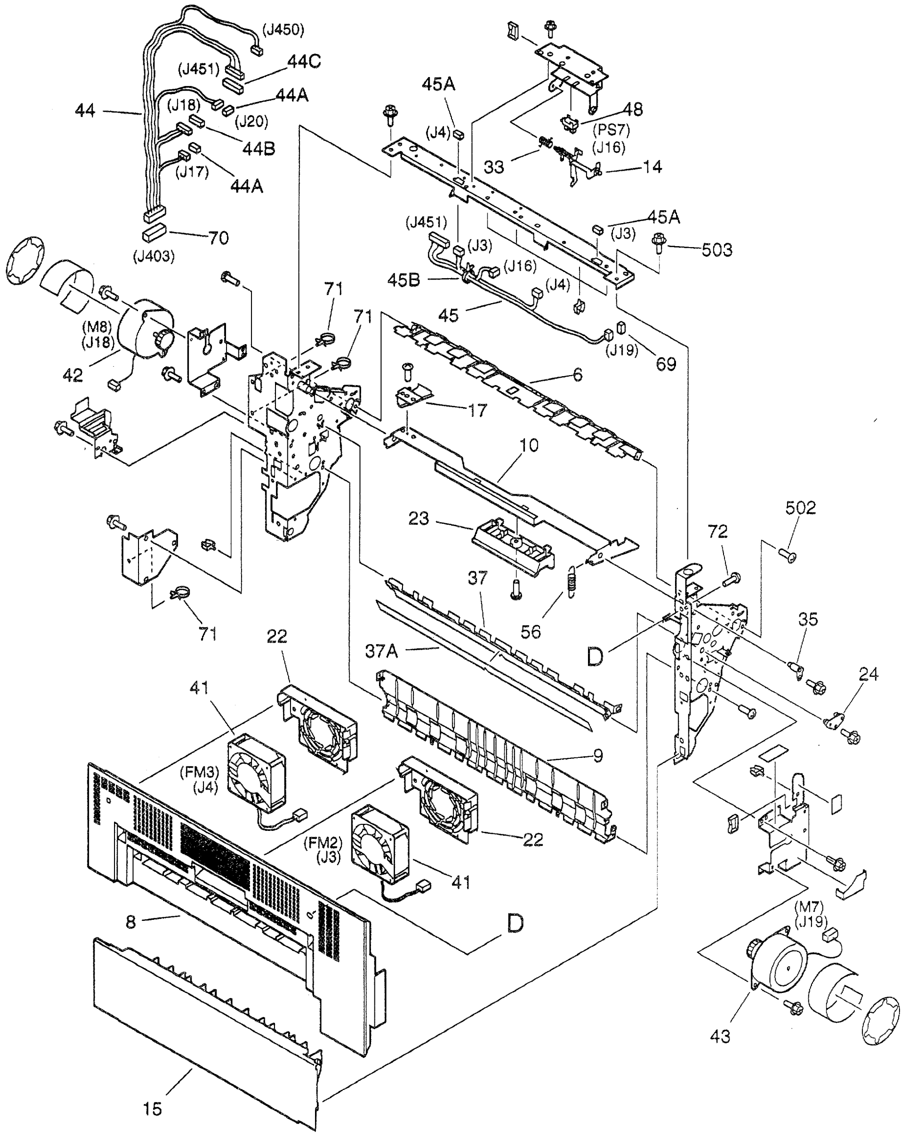
FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
341 - 502	XD1 − 1108 − 228		1	SHIM ﾋｮｳｼﾞｭﾝ ﾜｯｼｬ	

FIGURE 350 PAPER DELIVERY ASSEMBLY(1/2)
排紙部(1/2)


25
59
(J20)
21
25
59
51
(FM9)
46
A
B
49
74
20
60
63
505
75
75
34A
(J450)
34
503
(J25)
47
16
55
(PS6)
(J25)
29
58
26
66
31
58
27
68
502
3
4
5
4
58
30
28
67
52
4
4
5
4
11
501
18
12
39
39A
(SL2)
(J17)
40
73
2
65
C
13
38
62
36
504
49
50
50
2
65
32
54
1
64
1
64
53
19
A
B
71
61
75
504
75
505
63
7
C
2
65
32
54
57
65
2

NOTE:This assembly does not include the parts shown with key No.15 and 70.
注：このユニットにKey No. 15、70の部品は含まれません。

FIGURE 350 PAPER DELIVERY ASSEMBLY(2/2)
排紙部(2/2)



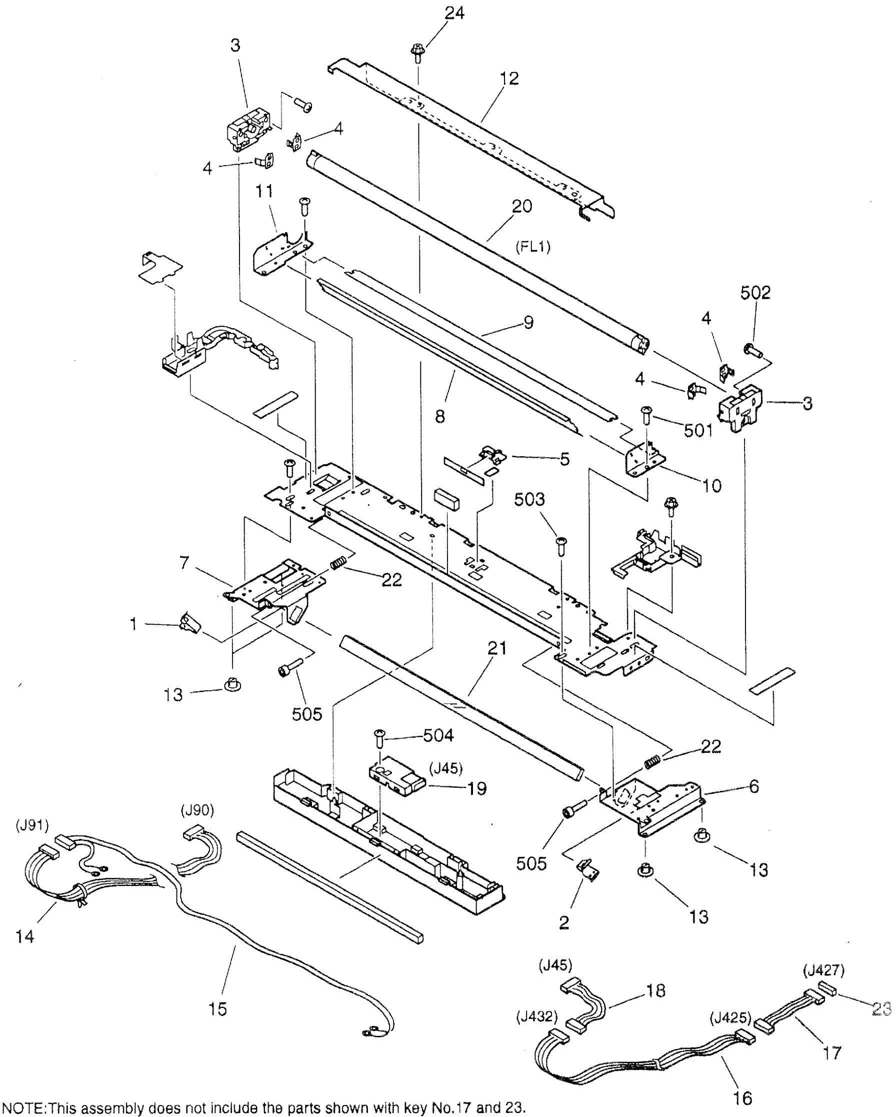
(J450)
(J451)
44C
44A
(J18)
(J20)
44
44B
(J17)
44A
70
(J403)
(M8)
(J18)
42
71
71
71
45A
(J4)
48
(PS7)
(J16)
33
14
(J451)
45A
(J3)
503
(J3)
45B
(J16)
(J4)
45
(J19)
69
6
17
10
23
502
72
37
56
35
24
D
37A
22
41
(FM3)
(J4)
9
22
(FM2)
(J3)
41
8
D
(M7)
(J19)
43
15

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
350 -	FG6 − 0472 − 000		1	PAPER DELIVERY ASSEMBLY 排紙部	
1	FB3 − 3119 − 000		4	ROLLER, CURL RELEASE カール取りコロ	
2	FB3 − 3119 − 000		8	ROLLER, CURL RELEASE カール取りコロ	
3	FB3 − 3161 − 020		1	SHAFT, EXTERNAL DELIVERY 外排紙軸	
4	FB3 − 3162 − 000		5	ROLLER, EXTERNAL DELIVERY, 1 外排紙コロ（1）	
5	FB3 − 3163 − 020		2	ROLLER, EXTERNAL DELIVERY, 2 外排紙コロ（2）	
6	FB4 − 2892 − 000		1	GUIDE, DELIVERY REVERSE, UPPER 排紙反転ガイド（上）	
7	FB4 − 2893 − 000		1	GUIDE, DELIVERY REVERSE, LOWER 排紙反転ガイド（下）	
8	FB4 − 2894 − 000		1	COVER, DELIVERY, UPPER 排紙カバー（上）	
9	FB4 − 2898 − 000		1	GUIDE, PAPER DELIVERY, LOWER 排紙ガイド（下）	
10	FB4 − 2900 − 000		1	HOOK, DELIVERY, 1 排紙フック（1）	
11	FB4 − 2901 − 000		1	ROLLER, INTERNAL DELIVERY 内排紙ローラ	
12	FB4 − 2902 − 000		1	ROLLER, EXTERNAL DELIVERY 外排紙ローラ	
13	FB4 − 2903 − 000		1	ROLLER, REVERSE 反転ローラ	
14	FB4 − 2904 − 000		1	FLAG, EXTERNAL SENSOR 外排紙センサ　フラッグ	
15	FB4 − 2912 − 000		1	COVER, DELIVERY, LOWER 排紙カバー（下）	SEE NOTE
16	FB4 − 2915 − 000		1	FLAG, INTERNAL SENSOR 内排紙センサ　フラッグ	
17	FB4 − 2917 − 000		1	HOOK, DELIVERY, 2 排紙フック（2）	
18	FB4 − 2919 − 000		1	FLAPPER, DELIVERY 排紙フラッパ	
19	FB4 − 2921 − 000		2	SUPPORT, CURL RELEASE ROLLER カール取りローラ支え	
20	FB4 − 2924 − 000		1	LINK, SOLENOID ソレノイド　リンク	
21	FB4 − 3094 − 000		1	COVER, CURL FAN カール　ファン　カバー	
22	FB4 − 3095 − 000		2	COVER, EXHAUST FAN 排熱ファン　カバー	
23	FB4 − 3099 − 000		1	HANDLE, DELIVERY 排紙把手	
24	FB4 − 3100 − 000		1	PIN, POSITIONING 位置決めピン	
25	FB4 − 3104 − 000		2	CAP, SPRING バネ　キャップ	
26	FB4 − 3121 − 000		4	ROLLER, INTERNAL DELIVERY 内排紙コロ	
27	FB4 − 3121 − 000		1	ROLLER, INTERNAL DELIVERY 内排紙コロ	
28	FB4 − 3121 − 000		1	ROLLER, INTERNAL DELIVERY 内排紙コロ	
29	FB4 − 3122 − 000		4	ARM, ROLLER, 1 コロ　アーム（1）	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
350 - 30	FB4 – 3123 – 000		1	ARM, ROLLER, 2 コロ　アーム (2)	
31	FB4 – 3124 – 000		1	ARM, ROLLER, 3 コロ　アーム (3)	
32	FB4 – 3126 – 000		4	SUPPORT, CURL RELEASE ROLLER カール取りローラ支え	
33	FB4 – 3303 – 000		1	SPRING, TORSION ネジリ　バネ	
34	FF3 – 2971 – 000		1	CABLE, INTERNAL DELIV. SENSOR 内排紙センサ束線	J25,450
34A	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J450
35	FF5 – 6943 – 000		1	PIN, POSITIONING 位置決めピン	
36	FF5 – 6944 – 000		1	PIN, POSITIONING 位置決めピン	
37	FF5 – 6946 – 000		1	CROSSMEMBER, FLAPPER フラッパ　ステイ	
37A	FB4 – 2914 – 000		1	PAD, FLAPPER フラッパ　パッド	
38	FF5 – 6947 – 000		1	PLATE, SWING 揺動板	
39	FF5 – 6948 – 000		1	GUIDE, PAPER DELIVERY, UPPER 排紙ガイド (上)	
39A	FB4 – 3098 – 000		1	ELIMINATOR, STATIC CHARGE 除電針	
40	FF5 – 6950 – 000		1	SOLENOID ソレノイド	SL2 J17
41	FF5 – 6951 – 000		2	FAN, COOLING 冷却ファン	FM2,3 J3,4
42	FF5 – 6961 – 000		1	MOTOR, STEPPING ステッピング　モータ	M8 J18
43	FF5 – 6962 – 000		1	MOTOR, STEPPING ステッピング　モータ	M7 J19
44	FG2 – 9528 – 000		1	CABLE, DELIVERY, REAR 排紙後束線	J17,18,20, J403,450,451
44A	VS1 – 5057 – 002		2	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J17,20
44B	VS1 – 5057 – 006		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J18
44C	VS1 – 5057 – 013		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J451
45	FG2 – 9529 – 000		1	CABLE, DELIVERY, UPPER 排紙上束線	J3,4,16,19,451
45A	VS1 – 5057 – 003		2	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	J3,4
45B	WT2 – 5041 – 000		1	CLAMP, CABLE ケーブル　クランプ	
46	FH6 – 1482 – 000		1	FAN, CURL RELEASE カール取りファン	FM9 J20
47	FH7 – 7394 – 000		1	PHOTO-INTERRUPTER フォトインタラプタ	PS6 J25
48	FH7 – 7394 – 000		1	PHOTO-INTERRUPTER フォトインタラプタ	PS7 J16
49	FS1 – 1510 – 000		2	BUSHING ブッシング	
50	FS5 – 1592 – 000		2	BUSHING ブッシング	
51	FS5 – 9144 – 000		1	SCREW,STEPPED,M3X1.5 ダンビス	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
350 - 52	FS6 - 2322 - 000		6	SPRING, TENSION ヒッパリ バネ	
53	FS6 - 2340 - 000		2	SPRING, COMPRESSION アッシュク バネ	
54	FS6 - 2340 - 000		4	SPRING, COMPRESSION アッシュク バネ	
55	FS6 - 2793 - 000		1	SPRING, TORSION ネジリ バネ	
56	FS6 - 2794 - 000		1	SPRING, TENSION ヒッパリ バネ	
57	FS6 - 2812 - 000		2	SPRING, TENSION ヒッパリ バネ	
58	FS6 - 2814 - 000		6	SPRING, TENSION ヒッパリ バネ	
59	FS6 - 2815 - 000		2	SPRING, COMPRESSION アッシュク バネ	
60	FS6 - 2817 - 000		1	SPRING, TENSION ヒッパリ バネ	
61	FS6 - 2818 - 000		1	SPRING, TENSION ヒッパリ バネ	
62	FS7 - 0083 - 000		1	GEAR, 18T 18T ギア	
63	FS7 - 0091 - 000		2	GEAR, 20T 20T ギア	
64	RA9 - 1106 - 000		4	SHAFT, CURL RELEASE ROLLER カール取りローラ軸	
65	RA9 - 1106 - 000		8	SHAFT, CURL RELEASE ROLLER カール取りローラ軸	
66	RA9 - 1106 - 000		4	SHAFT, CURL RELEASE ROLLER カール取りローラ軸	
67	RA9 - 1106 - 000		1	SHAFT, CURL RELEASE ROLLER カール取りローラ軸	
68	RA9 - 1106 - 000		1	SHAFT, CURL RELEASE ROLLER カール取りローラ軸	
69	VS1 - 5057 - 004		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	J19
70	VS1 - 6319 - 026		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	SEE NOTE J403
71	WT2 - 5041 - 000		8	CLAMP, CABLE ケーブル クランプ	
72	XA9 - 0605 - 000		4	SCREW,M4X8 タイト ネジ	
73	XD9 - 0131 - 000		1	RING,E E リング	
74	XD9 - 0137 - 000		10	RING,E E リング	
75	XG9 - 0094 - 000		4	BEARING, BALL ベアリング	
501	XB1 - 2300 - 409		2	SCREW,MACH.,TRUSS HEAD,M3X4 バインド ネジ	
502	XB1 - 2300 - 609		14	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
503	XB3 - 6300 - 609		27	SCREW,RS,M3X6 RS タイト ネジ	
504	XD3 - 2200 - 122		1	PIN,DOWEL ヘイコウ ピン	
505	XD3 - 2200 - 142		2	PIN,DOWEL ヘイコウ ピン	

FIGURE 400 MIRROR ASSEMBLY 1
第1ミラー台部


24
3
12
4
4
11
20
(FL1)
502
4
9
4
3
8
501
5
10
503
7
22
1
21
13
505
504
22
(J45)
19
6
(J90)
(J91)
505
13
14
13
2
(J45)
(J427)
18
(J432)
(J425)
23
17
15
16

NOTE:This assembly does not include the parts shown with key No.17 and 23.
注：このユニットにKey　No. 17、23の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
400 -	FG6 — 0596 — 000		1	MIRROR ASSEMBLY 1 第1ミラー台部	
1	FB1 — 6649 — 000		1	SPRING, LEAF, REAR 板バネ（後）	
2	FB1 — 6657 — 000		1	SPRING, MIRROR MOUNT ミラー台押えバネ	
3	FB2 — 1947 — 000		2	MOUNT, LAMP, FRONT ランプ支台（前）	
4	FB2 — 1954 — 000		4	PLATE, CONTACT 電極バネ板	
5	FB2 — 1961 — 000		1	CAP, EXPOSURE CONTROL SENSOR 調光センサ　キャップ	
6	FB3 — 2402 — 000		1	SUPPORT, MIRROR, FRONT ミラー支板（前）	
7	FB3 — 2403 — 000		1	SUPPORT, MIRROR, REAR ミラー支板（後）	
8	FB3 — 2404 — 000		1	REFLECTOR, UPPER 反射笠（上）	
9	FB3 — 2405 — 000		1	REFLECTOR, LOWER 反射笠（下）	
10	FB3 — 2406 — 000		1	SUPPORT, REFLECTOR, FRONT 反射笠支板（前）	
11	FB3 — 2407 — 000		1	SUPPORT, REFLECTOR, REAR 反射笠支板（後）	
12	FB3 — 2410 — 020		1	PLATE, LIGHT-BLOCKING 遮光板	
13	FB3 — 2411 — 000		4	PIN, SLIDE スライド　ピン	
14	FF3 — 1138 — 000		1	CABLE, FLUORESCENT LAMP, 1 蛍光灯束線 (1)	J90,91
15	FF3 — 1139 — 000		1	CABLE, FLUORESCENT LAMP, 2 蛍光灯束線 (2)	J91
16	FF3 — 1140 — 000		1	CABLE, INTENSITY SENSOR, 1 調光センサ束線 (1)	J425,432
17	FF3 — 2998 — 000		1	CABLE, INTENSITY CONNECTING 調光中継束線	SEE NOTE J425,427
18	FF3 — 3020 — 000		1	CABLE, INTENSITY SENSOR, 2 調光センサ束線 (2)	J45,432
19	FG2 — 9719 — 000		1	INTENSITY SENSOR PCB ASSEMBLY 調光センサ回路基板	J45
20	FH7 — 3314 — 000		1	LAMP, FLUORESCENT 蛍光灯	FL1
21	FN5 — 4073 — 000		1	MIRROR UNIT, 1 ミラー (1)	
22	FS6 — 2341 — 000		2	SPRING, COMPRESSION アッシュク　バネ	
23	VS1 — 5057 — 004		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	SEE NOTE J427
24	XA9 — 0626 — 000		6	SCREW,RS,M3X6 RS　タイト　ネジ	
501	XB1 — 2300 — 405		3	SCREW,MACH.,TRUSS HEAD,M3X4 バインド　ネジ	
502	XB1 — 2300 — 607		4	SCREW,MACH.,TRUSS HEAD,M3X6 バインド　ネジ	
503	XB2 — 5300 — 609		4	SCREW,W/WASHER,M3X6 バネツキ　バインド　ネジ	
504	XB4 — 7300 — 609		1	SCREW,TAPPING,TRUSS HEAD,M3X6 バインド　タッピン　ネジ	
505	XB7 — 1030 — 149		2	SCREW,ALLEN HEAD,M3X14 ロッカク　アナツキ　ボルト	

FIGURE 401 MIRROR ASSEMBLY 2 第2ミラー台部

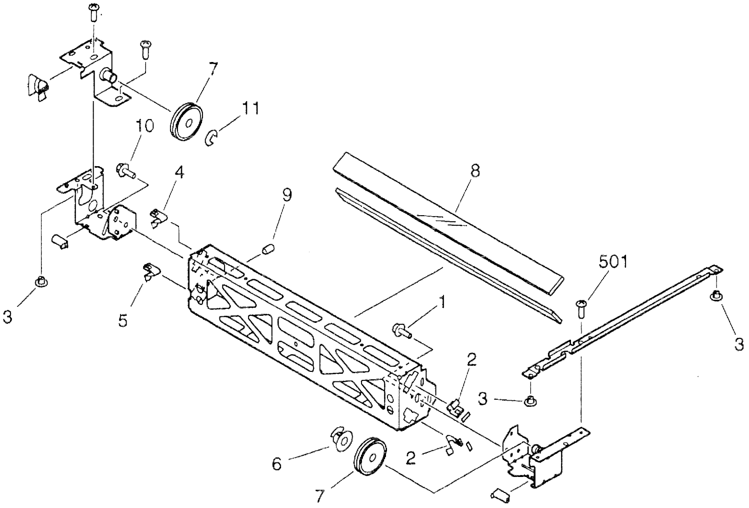


FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
401 –	FG6 – 0438 – 000	N	1	MIRROR ASSEMBLY 2 第2ミラー台部	
1	FA9 – 3336 – 000		2	SCREW,ALLEN HEAD,M3X8 ロッカク アナツキ ボルト	
2	FB1 – 6657 – 000		2	SPRING, MIRROR MOUNT ミラー台押えバネ	
3	FB3 – 2411 – 000		4	PIN, SLIDE スライド ピン	
4	FB3 – 2423 – 000		1	SPRING, LEAF 板バネ	
5	FB3 – 2424 – 000		1	SPRING, LEAF 板バネ	
6	FB4 – 2765 – 000		1	GUIDE, CABLE, 3 束線ガイド (3)	
7	FB4 – 2769 – 000		2	PULLEY プーリ	
8	FN5 – 4074 – 000		2	MIRROR UNIT, 2/3 ミラー (2/3)	
9	XA9 – 0425 – 000		1	SETSCREW,HEX SOCKET ロッカク アナツキ トメネジ	
10	XA9 – 0626 – 000		2	SCREW,RS,M3X6 RS タイト ネジ	
11	XD9 – 0137 – 000		1	RING,E E リング	
501	XB6 – 7300 – 409		4	SCREW,TP,M3X4 TP ネジ	

FIGURE 460 SCANNER ASSEMBLY スキャナ部

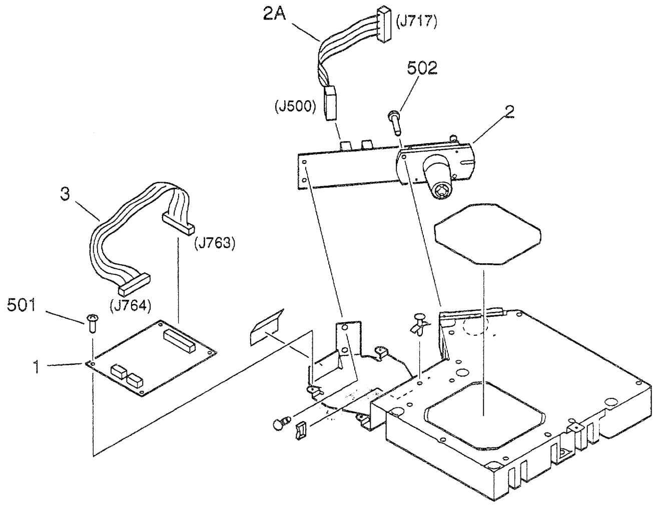
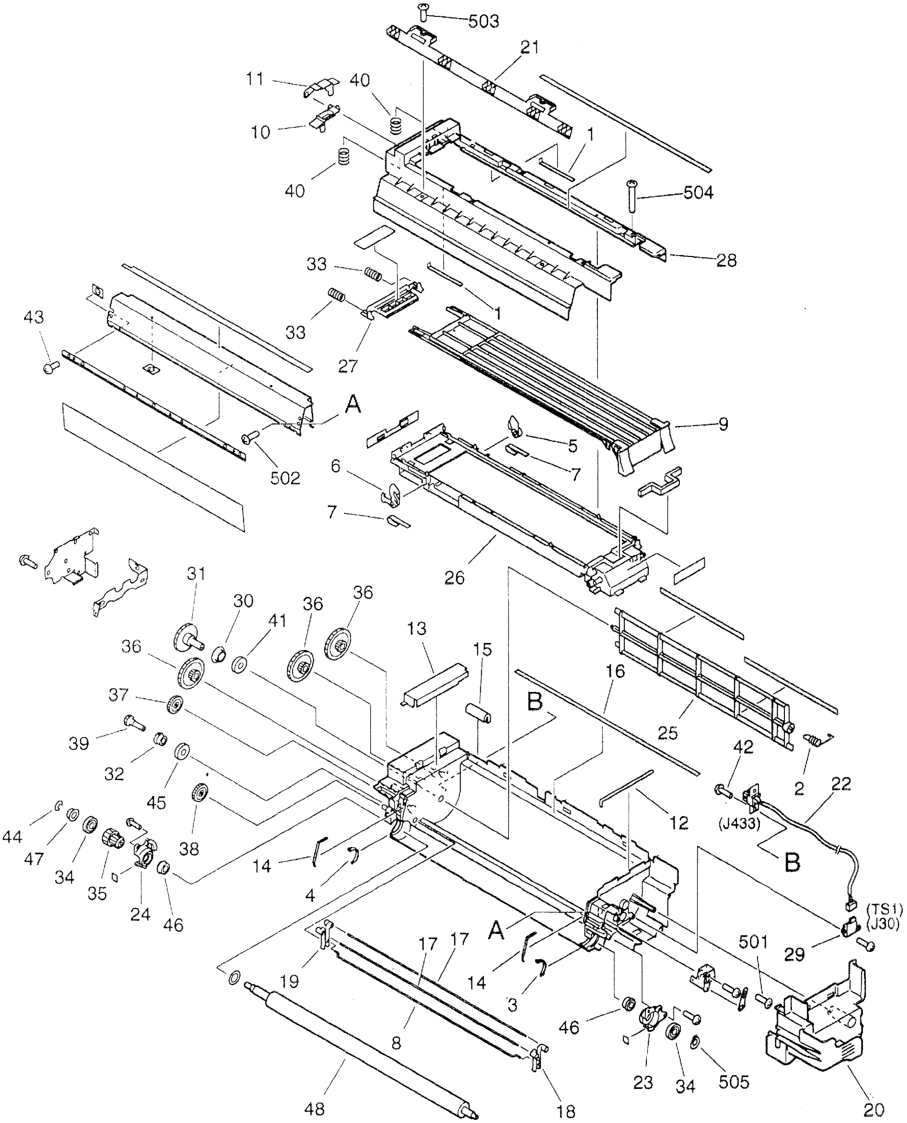


FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
460 -	FG6 − 0440 − 000		1	SCANNER ASSEMBLY スキャナ部	
1	FG2 − 9694 − 000		1	POLYGON MOTOR DRIVER PCB ASS'Y ポリゴン　モータ　ドライバ回路基板	
2	FG6 − 0441 − 000		1	LASER DRIVER PCB ASSEMBLY レーザ　ドライバ回路基板	
2 A	FG2 − 9693 − 000		1	CABLE, LASER/IP CONNECTING レーザ/イメージ　プロセッサ中継束線	J500,717
3	FG6 − 2340 − 000		1	CABLE, POLYGON MOTOR ポリゴン　モータ束線	J763,764
501	XB1 − 2300 − 609		8	SCREW,MACH.,TRUSS HEAD,M3X6 バインド　ネジ	
502	XB1 − 2301 − 209		2	SCREW,MACH.,TRUSS HEAD,M3X12 バインド　ネジ	

FIGURE 640 DEVELOPING ASSEMBLY 現像器



503
21
11
40
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504
28
33
1
33
27
43
A
9
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502
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7
26
31
30
36
36
41
36
13
15
16
37
B
25
39
42
2
22
32
45
(J433)
38
12
B
44
47
34
35
24
46
14
4
A
(TS1)
(J30)
17
17
29
501
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14
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46
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23
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505
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18
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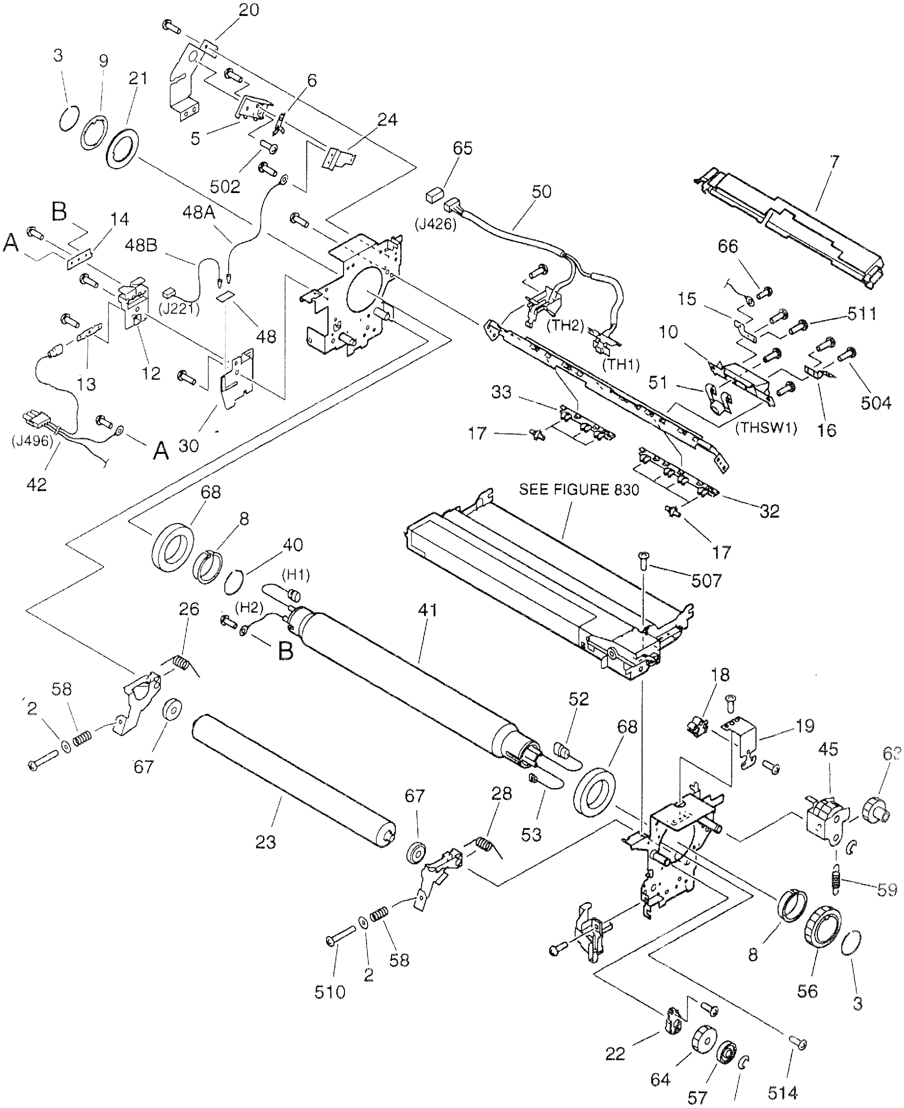
FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
640 –	FG6 – 0450 – 030		1	DEVELOPING ASSEMBLY 現像器	
1	FB1 – 5816 – 000		2	SPRING, LEAF 板バネ	
2	FB1 – 6710 – 000		1	SPRING, COMPRESSION アッシュク バネ	
3	FB1 – 6718 – 000		1	SEAL, FRONT 端部シール板（前）	
4	FB1 – 6719 – 000		1	SEAL, REAR 端部シール板（後）	
5	FB1 – 7218 – 000		1	LOCK, CARTRIDGE, RIGHT カートリッジ ロック（右）	
6	FB1 – 7219 – 000		1	LOCK, CARTRIDGE, LEFT カートリッジ ロック（左）	
7	FB1 – 7220 – 000		2	SPRING, LEAF 板バネ	
8	FB3 – 2679 – 000		1	ROD, STIRRING 攪拌棒	
9	FB3 – 2684 – 000		1	COVER, SLIDE スライド カバー	
10	FB3 – 2687 – 000		1	LOCK, REAR, LEFT 後ろロック（左）	
11	FB3 – 2688 – 000		1	LOCK, REAR, RIGHT 後ろロック（右）	
12	FB3 – 2691 – 000		1	SEAL, DEVELOPING, FRONT 容器シール（前）	
13	FB3 – 2692 – 000		1	SEAL, DEVELOPING, REAR 容器シール（後）	
14	FB3 – 2693 – 000		2	SEAL, DEVELOPING, SIDE 容器サイド シール	
15	FB3 – 2696 – 000		1	SEAL, RIB リブ シール	
16	FB3 – 2697 – 000		1	SEAL, DEVELOPING, BACK SIDE 容器シール（背面）	
17	FB3 – 2712 – 000		2	SHAFT, AUXILIARY 補助軸	
18	FB4 – 3057 – 000		1	SUPPORT, STIRRING, FRONT 攪拌支え台（前）	
19	FB4 – 3058 – 000		1	SUPPORT, STIRRING, REAR 攪拌支え台（後）	
20	FB4 – 5381 – 000		1	COVER, DEVELOPING, FRONT 現像前カバー	
21	FB5 – 0261 – 000		1	PLATE, SIDE SPACER 横スペーサ板	
22	FF3 – 1303 – 000		1	CABLE, TONER SENSOR トナー センサ束線	J30,433
23	FF5 – 4480 – 000		1	HOLDER, SLEEVE, FRONT スリーブ ホルダ（前）	
24	FF5 – 4481 – 000		1	HOLDER, SLEEVE, REAR スリーブ ホルダ（後）	
25	FF5 – 4482 – 020		1	ROD, STIRRING 攪拌棒	
26	FF5 – 4485 – 000		1	COVER, HOPPER, LOWER ホッパ カバー（下）	
27	FF5 – 4550 – 000		1	COVER, BUFFER バッファ カバー	
28	FF5 – 6927 – 000		1	COVER, HOPPER, UPPER ホッパ カバー（上）	
29	FH7 – 7422 – 000		1	SENSOR, TONER トナー センサ	TS1 J30

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
640 - 30	FS1 - 1594 - 000		1	BUSHING ブッシング	
31	FS5 - 0360 - 000		1	GEAR, 48T 48T ギア	
32	FS5 - 1212 - 000		1	BUSHING ブッシング	
33	FS5 - 2306 - 000		2	SPRING, COMPRESSION アッシュク バネ	
34	FS5 - 6448 - 000		2	ROLLER, 1 突き当てコロ (1)	
35	FS6 - 0552 - 000		1	GEAR, 16T/20T 16T／20T ギア	
36	FS6 - 0553 - 000		3	GEAR, 15T/48T 15T／48T ギア	
37	FS6 - 0579 - 000		1	GEAR, 26T 26T ギア	
38	FS6 - 0580 - 000		1	GEAR, 24T 24T ギア	
39	FS6 - 0592 - 000		1	GEAR, 14T 14T ギア	
40	FS6 - 2318 - 000		2	SPRING, COMPRESSION アッシュク バネ	
41	X71 - 9310 - 000		1	SEAL, OIL オイル シール	
42	XA9 - 0591 - 000		12	SCREW,M3X8 タイト ネジ	
43	XA9 - 0714 - 000		4	SCREW,M3X4 セムス ネジ	
44	XD9 - 0131 - 000		1	RING,E E リング	
45	XG9 - 0111 - 000		1	SEAL, OIL オイル シール	
46	XG9 - 0218 - 000		2	BEARING, BALL ボール ベアリング	
47	XG9 - 0262 - 000		1	BEARING, BALL, SUJ-2 P0 6MM ボール ベアリング	
48	FG6 - 0626 - 000		1	DEVELOPING CYLINDER UNIT 現像シリンダ ユニット	GP405,355,335,315 iR400E,400S iR330E,330S
	FG5 - 9237 - 000		1	DEVELOPING SLEEVE ASSEMBLY 現像スリーブ ユニット	GP40,35F,35,31F,31
501	XB1 - 2300 - 605		1	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
502	XB1 - 2300 - 805		2	SCREW,MACH.,TRUSS HEAD,M3X8 バインド ネジ	
503	XB1 - 2300 - 807		2	SCREW,MACH.,TRUSS HEAD,M3X8 バインド ネジ	
504	XB4 - 7301 - 609		4	SCREW,TAPPING,TRUSS HEAD,M3X16 バインド タッピン ネジ	
505	XD2 - 2100 - 802		1	RING,GRIP グリップ リング	

FIGURE 810 FIXING ASSEMBLY(1/2) 定着器(1/2)


20
3
9
21
6
24
5
502
65
50
7
(J426)
B
14
48A
A
48B
66
15
511
(J221)
48
(TH2)
10
(TH1)
13
12
51
504
33
17
(THSW1)
16
(J496)
A
30
42
68
SEE FIGURE 830
8
32
40
17
(H1)
507
26
(H2)
41
B
58
2
67
18
52
19
68
45
63
67
28
23
53
59
58
8
56
510
2
3
22
64
514
57
516

NOTE1:This assembly includes the assembly shown in Figure 830.
NOTE2:This assembly does not include the part shown with key No.65.
注1：このユニットはFigure830のユニットを含みます。
注2：このユニットにKey No. 65の部品は含まれません。

# FIGURE 810 FIXING ASSEMBLY(2/2)
定着器(2/2)

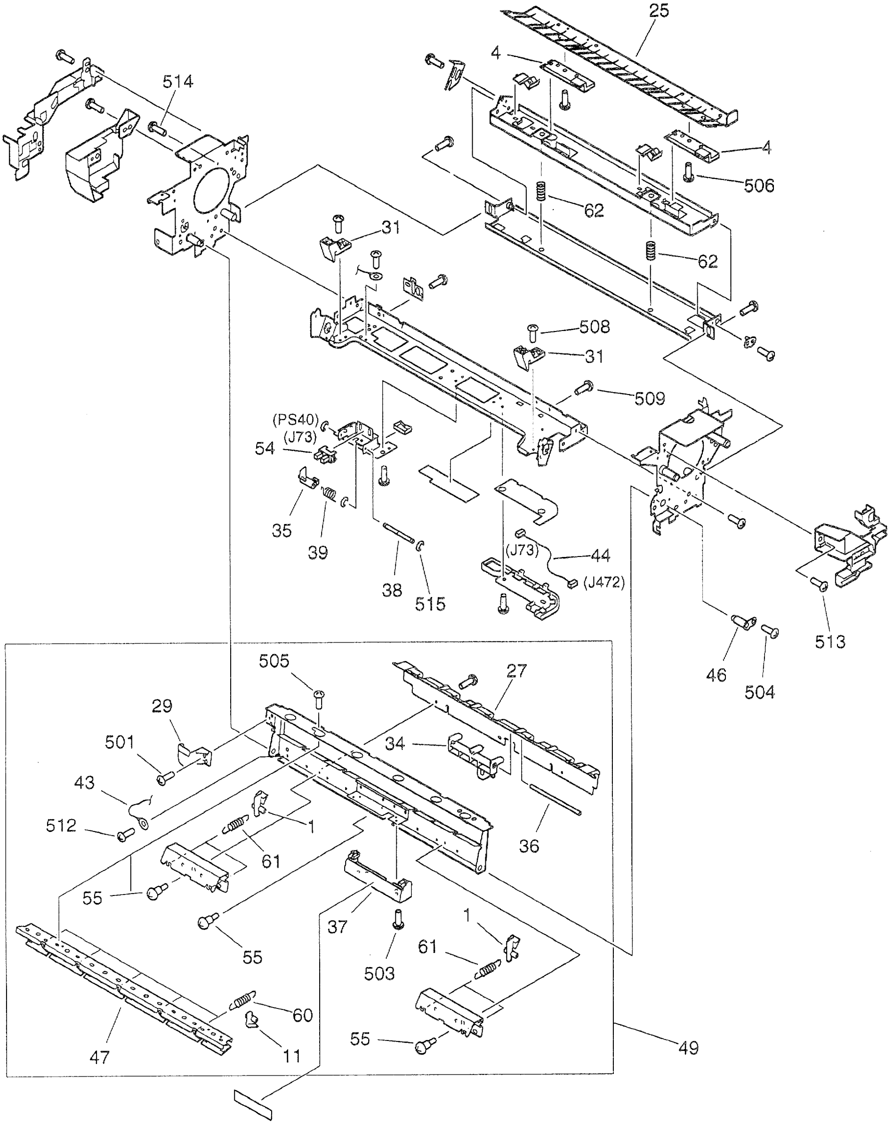

25
4
514
4
506
62
31
62
508
31
509
(PS40)
(J73)
54
35
39
38
515
(J73)
44
(J472)
513
46
504
505
27
29
501
34
43
512
1
61
36
55
55
37
1
61
503
60
55
49
47
11

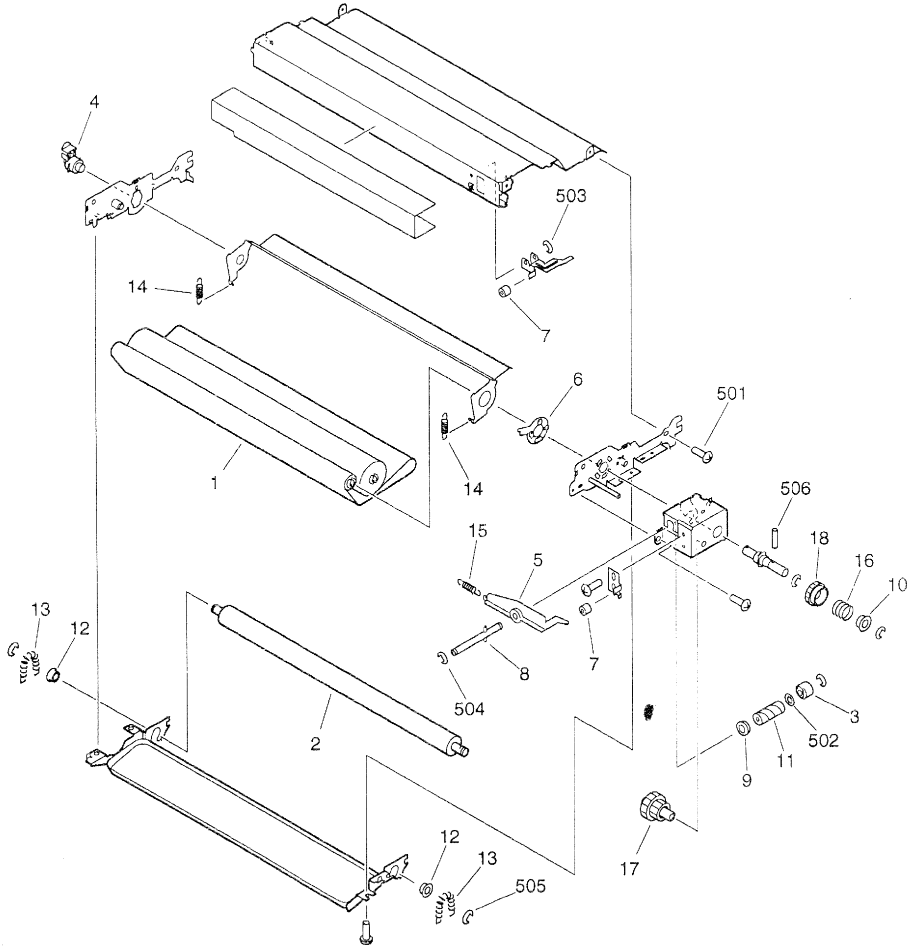
FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
810 -	FG6 – 3879 – 000		1	FIXING ASSEMBLY 定着器	GP405,355,315 100V SEE NOTE 1
	FG6 – 0460 – 000		1	FIXING ASSEMBLY 定着器	GP40,35F,35,31F,31 100V SEE NOTE 1
	FG6 – 0461 – 000		1	FIXING ASSEMBLY 定着器	120V SEE NOTE 1
	FG6 – 0462 – 000		1	FIXING ASSEMBLY 定着器	220/240V SEE NOTE 1
1	FA2 – 9037 – 000		4	CLAW, SEPARATION, LOWER 分離爪 (下)	
2	FA2 – 9078 – 000		2	WASHER, SPRING バネザ	
3	FA3 – 8894 – 000		2	RING, RETAINING トメ ワ	
4	FA5 – 2965 – 000		2	SUPPORT, GUIDE AUXILIARY ガイド補助板	
5	FB1 – 5934 – 000		1	MOUNT, ELECTRODE 電極支板	
6	FB1 – 5936 – 000		1	SPRING, LEAF 板バネ	
7	FB1 – 6820 – 020		1	COVER, SENSOR センサ カバー	
8	FB1 – 6823 – 000		2	BUSHING ブッシング	
9	FB1 – 6824 – 000		1	RING, BIAS バイアス リング	
10	FB1 – 6826 – 000		1	HOLDER, SWITCH スイッチ ホルダ	
11	FB1 – 7075 – 000		5	CLAW, SEPARATION, UPPER 分離爪 (上)	
12	FB1 – 8663 – 000		1	MOUNT, ELECTRODE 電極支板	
13	FB1 – 8664 – 000		1	TERMINAL, 1 電極 (1)	
14	FB1 – 8665 – 000		1	TERMINAL, 2 電極 (2)	
15	FB1 – 8668 – 000		1	TERMINAL, SWITCH, 1 サーモ スイッチ端子 (1)	
16	FB1 – 8669 – 000		1	TERMINAL, SWITCH, 2 サーモ スイッチ端子 (2)	
17	FB1 – 8776 – 000		7	ROWEL 拍車	
18	FB4 – 2856 – 000		1	HOLDER, HEATER, 1 ヒータ ホルダ (1)	
19	FB4 – 2857 – 000		1	HOLDER, HEATER, 2 ヒータ ホルダ (2)	
20	FB4 – 2858 – 000		1	HOLDER, HEATER, 3 ヒータ ホルダ (3)	
21	FB4 – 2859 – 000		1	PLATE, BIAS INSULATION バイアス絶縁板	
22	FB4 – 2860 – 000		1	PLATE, SWING, REAR 揺動突き当て板 (後)	
23	FB4 – 2867 – 000		1	ROLLER, FIXING, LOWER ローラ (下)	
24	FB4 – 2869 – 000		1	PLATE, ELECTRODE 電極押え板	
25	FB4 – 2870 – 000		1	PLATE, PAPER INLET GUIDE 紙入口ガイド板	
26	FB4 – 2876 – 000		1	SPRING, TORSION ネジリ バネ	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
810 - 27	FB4 – 2882 – 000		1	GUIDE, LOWER SEPARATION 分離下ガイド	
28	FB4 – 2886 – 000		1	SPRING, TORSION ネジリ バネ	
29	FB4 – 2887 – 000		1	LEVER, RELEASE 解除把手	
30	FB4 – 2890 – 000		1	HOLDER, BIAS CONNECTING バイアス中継ホルダ	
31	FB4 – 3106 – 000		2	SUPPORT, SPRING ばね受け台	
32	FB4 – 3108 – 000		1	MOUNT, ROWEL, FRONT 拍車台（前）	
33	FB4 – 3109 – 000		1	MOUNT, ROWEL, REAR 拍車台（後）	
34	FB4 – 3175 – 000		1	ARM, SENSOR センサ アーム	
35	FB4 – 3176 – 000		1	FLAG, SENSOR センサ フラグ	
36	FB4 – 3178 – 000		1	SHAFT, SENSOR センサ軸	
37	FB4 – 3179 – 000		1	COVER, SENSOR センサ カバー	
38	FB4 – 3183 – 000		1	SHAFT, SENSOR FLAG センサ フラグ軸	
39	FB4 – 3184 – 000		1	SPRING, TORSION ネジリ バネ	
40	FB5 – 0287 – 000		1	RING, RETAINING 止め輪	
41	FB5 – 0289 – 000		1	ROLLER, FIXING 定着ローラ	
42	FF3 – 2985 – 000		1	CABLE, FIXING HEATER 定着ヒータ束線	J496
43	FF3 – 3016 – 000		1	CABLE, GROUNDING アース束線	
44	FF3 – 3021 – 000		1	CABLE, PAPER OUTLET SENSOR 定着出口センサ束線	J73,472
45	FF5 – 6935 – 000		1	PLATE, SWING 揺動板	
46	FF5 – 6942 – 000		1	PIN, POSITIONING 位置決めピン	
47	FF5 – 6987 – 000		1	GUIDE, UPPER SEPARATION 分離上ガイド	
48	FG2 – 9712 – 000		1	BIAS CONNECTING PCB UNIT バイアス中継回路基板	
48A	FF3 – 2986 – 000		1	CABLE, FIXING BIAS 定着バイアス束線	
48B	FF3 – 2987 – 000		1	CABLE, FIXING BIAS 定着バイアス束線	J221
49	FG6 – 0468 – 000		1	FIXING SEPARATION CLAW UNIT 定着分離爪ユニット	
50	FG6 – 3881 – 000		1	THERMISTOR UNIT サーミスタ ユニット	GP405,355,335,315 iR400E,400S iR330E,330S TH1,2 J426
	FG6 – 0470 – 000		1	THERMISTOR UNIT サーミスタ ユニット	GP40,35F,35,31F,31 TH1,2 J426
51	FG6 – 3882 – 000		1	THERMOSWITCH UNIT サーモスイッチ ユニット	GP405,355,335,315 iR400E,400S iR330E,330S THSW1

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
810 - 51	FG6 − 0471 − 000		1	THERMOSWITCH UNIT サーモスイッチ ユニット	GP40,35F,35,31F,31 THSW1
52	FH7 − 4570 − 000		1	HEATER, MAIN メイン ヒータ	100V H1
	FH7 − 4571 − 000		1	HEATER, MAIN メイン ヒータ	120V H1
	FH7 − 4572 − 000		1	HEATER, MAIN メイン ヒータ	220/240V H1
53	FH7 − 4573 − 000		1	HEATER, SUB サブ ヒータ	100V H2
	FH7 − 4574 − 000		1	HEATER, SUB サブ ヒータ	120V H2
	FH7 − 4575 − 000		1	HEATER, SUB サブ ヒータ	220/240V H2
54	FH7 − 7394 − 000		1	PHOTO-INTERRUPTER フォトインタラプタ	PS40 J73
55	FS1 − 9010 − 000		3	SCREW, STEPPED, M3 ダンビス	
56	FS5 − 0379 − 000		1	GEAR, 45T 45T ギア	
57	FS5 − 6586 − 000		1	ROLLER, PAPER DELIVERY, CENTER 排紙コロ (中)	
58	FS6 − 2801 − 000		2	SPRING, COMPRESSION アッシュク バネ	
59	FS6 − 2802 − 000		1	SPRING, TENSION ヒッパリ バネ	
60	FS6 − 2803 − 000		5	SPRING, TENSION ヒッパリ バネ	
61	FS6 − 2804 − 000		4	SPRING, TENSION ヒッパリ バネ	
62	FS6 − 2807 − 000		2	SPRING, COMPRESSION アッシュク バネ	
63	FS7 − 0097 − 000		1	GEAR, 26T 26T ギア	
64	FS7 − 0102 − 000		1	GEAR, 28T 28T ギア	
65	VS1 − 5057 − 005		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	SEE NOTE 2 J426
66	XA9 − 0249 − 000		5	SCREW,M4X8 ビス	
67	XG9 − 0208 − 000		2	BEARING, BALL ボール ベアリング	
68	XG9 − 0356 − 000		2	BEARING ベアリング	
501	XB1 − 2300 − 409		1	SCREW,MACH.,TRUSS HEAD,M3X4 バインド ネジ	
502	XB1 − 2300 − 609		7	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
503	XB1 − 2300 − 609		2	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
504	XB1 − 2400 − 609		22	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
505	XB1 − 2400 − 609		4	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
506	XB1 − 2400 − 609		2	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
507	XB1 − 2400 − 609		2	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	
508	XB1 − 2400 − 809		2	SCREW,MACH.,TRUSS HEAD,M4X8 バインド ネジ	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
810 - 509	XB1 — 2401 — 406		2	SCREW,MACH.,TRUSS HEAD,M4X14 バインド ネジ	
510	XB1 — 2404 — 509		2	SCREW,MACH.,TRUSS HEAD,M4X45 バインド ネジ	
511	XB2 — 2300 — 607		3	SCREW,W/WASHER,M3X6 バネツキ ナベ ネジ	
512	XB2 — 7400 — 606		2	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	
513	XB2 — 8400 — 609		6	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	
514	XB6 — 7400 — 609		2	SCREW,TP,M4X6 TP ネジ	
515	XD2 — 1100 — 242		2	RING,E E リング	
516	XD2 — 1100 — 642		2	RING,E E リング	

FIGURE 830 FIXING CLEANING ASSEMBLY
定着クリーナ部



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NOTE:This assembly is included in the assembly shown in Figure 810.
注：このユニットはFigure810のユニットに含まれます。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
830 -	FG6 — 0469 — 000		1	FIXING CLEANING ASSEMBLY 定着クリーナ部	SEE NOTE
1	FA3 — 8908 — 000		1	CLEANING BELT, FIXING ROLLER ウェブ	
2	FA6 — 3063 — 000		1	ROLLER, PRESSURE 加圧ローラ	
3	FB1 — 6833 — 000		1	BUSHING ブッシング	
4	FB1 — 6835 — 020		1	SHAFT, SET セット軸	
5	FB4 — 3082 — 000		1	ARM, ONE-WAY ワンウェイ　アーム	
6	FB4 — 3089 — 000		1	RING, WEB ROTARY SUPPORT ウェブ回転支えリング	
7	FB4 — 3190 — 000		2	PAD, SILENCER 消音パッド	
8	FF5 — 1187 — 000		1	SHAFT, WORM ウォーム軸	
9	FS1 — 1401 — 000		1	BUSHING ブッシング	
10	FS1 — 1465 — 000		1	BUSHING ブッシング	
11	FS5 — 0348 — 000		1	GEAR, WORM ウォーム　ギア	
12	FS5 — 1809 — 000		2	BUSHING ブッシング	
13	FS6 — 2787 — 000		2	SPRING, TENSION ヒッパリ　バネ	
14	FS6 — 2797 — 000		2	SPRING, TENSION ヒッパリ　バネ	
15	FS6 — 2798 — 000		1	SPRING, TENSION ヒッパリ　バネ	
16	FS6 — 2800 — 000		1	SPRING, COMPRESSION アッシュク　バネ	
17	FS7 — 0098 — 000		1	GEAR, 21T/24T 21T／24T　ギア	
18	FS7 — 0099 — 000		1	GEAR, 26T 26T　ギア	
501	XB1 — 2400 — 609		10	SCREW,MACH.,TRUSS HEAD,M4X6 バインド　ネジ	
502	XD1 — 1106 — 235		1	SHIM ヒョウジュン　ワッシャ	
503	XD2 — 1100 — 322		1	RING,E E　リング	
504	XD2 — 1100 — 502		2	RING,E E　リング	
505	XD2 — 1100 — 642		4	RING,E E　リング	
506	XD3 — 2200 — 142		1	PIN,DOWEL ヘイコウ　ピン	

FIGURE 900 PCB LOCATION DIAGRAM(1/2)
回路基板配置図(1/2)

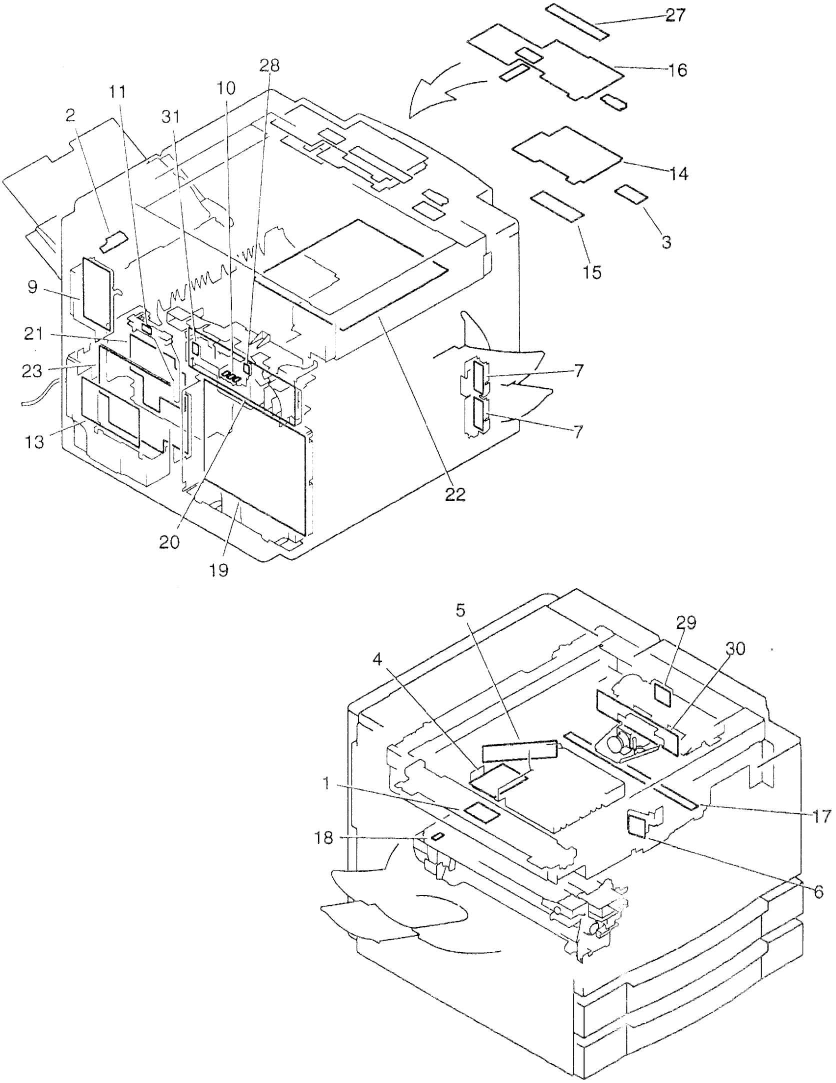
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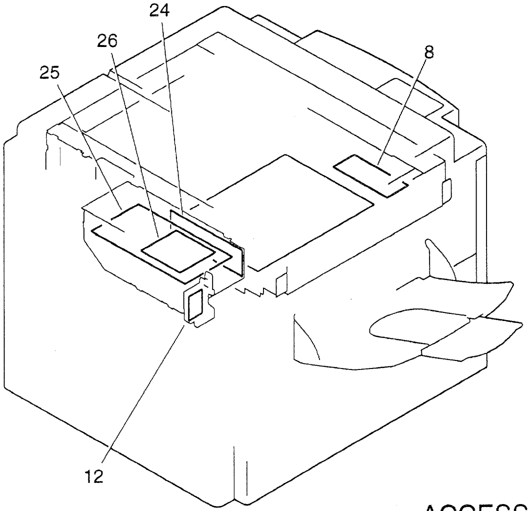
FIGURE 900 PCB LOCATION DIAGRAM(2/2) 回路基板配置図(2/2)

GP35F/31F
imageRUNNER 400E/330E



ACCESSORIES

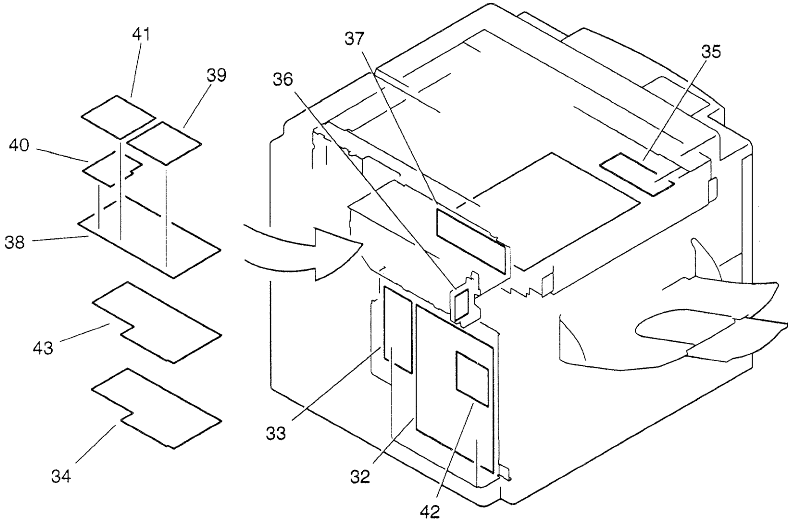

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FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
900 –	NPN		RF	PCB LOCATION DIAGRAM 回路基板配置図	
1	PCB		RF	INTENSITY SENSOR PCB ASSEMBLY 調光センサ回路基板	FIGURE 400-19
2	PCB		RF	MULTI PAPER SIZE PCB ASSEMBLY マルチ紙サイズ検知回路基板	FIGURE 326-11
3	PCB		RF	INVERTER PCB ASSEMBLY インバータ回路基板	FIGURE 926
4	PCB		RF	POLYGON MOTOR DRIVER PCB ASS'Y ポリゴン　モータ　ドライバ回路基板	FIGURE 460-1
5	PCB		RF	LASER DRIVER PCB ASSEMBLY レーザ　ドライバ回路基板	FIGURE 460-2
6	PCB		RF	BEAM DETECTOR IC PCB ASSEMBLY ビーム　ディテクタIC回路基板	FIGURE 210-NPN
7	PCB		RF	CASSETTE SIZE SENSOR PCB ASS'Y サイズ検知回路基板	FIGURE 101-9D
8	PCB		RF	BATTERY BOARD PCB ASSEMBLY バッテリ　ボード回路基板	FIGURE 991-12
9	PCB		RF	APC POWER SUPPLY PCB ASSEMBLY APC電源回路基板	FIGURE 105-19
10	PCB		RF	TRANSFER CONNECTOR PCB ASS'Y 転写コネクタ回路基板	FIGURE 105-NPN
11	PCB		RF	DEV. BIAS CONNECTING PCB ASS'Y 現像バイアス中継回路基板	FIGURE 105-20
12	PCB		RF	MODULAR JACK PCB ASSEMBLY モジュラ　ジャック回路基板	FIGURE 991-10
13	PCB		RF	NOISE FILTER PCB ASSEMBLY ノイズ　フィルタ回路基板	FIGURE 110-10 FIGURE 111-9
14	PCB		RF	CONTROL PANEL CPU PCB ASSEMBLY 操作CPU回路基板	FIGURE 920
15	PCB		RF	DOWN LOAD PCB ASSEMBLY ダウン　ロード回路基板	FIGURE 130-30
16	PCB		RF	CONTROL PANEL KEY PCB ASSEMBLY 操作キー回路基板	FIGURE 925
17	PCB		RF	PRE-COND. LAMP PCB ASSEMBLY 前露光回路基板	FIGURE 210-32
18	PCB		RF	BIAS CONNECTING PCB ASSEMBLY バイアス中継回路基板	FIGURE 810-48
19	PCB		RF	DC POWER SUPPLY PCB ASSEMBLY 複合電源回路基板	FIGURE 910
20	PCB		RF	DC CONTROLLER PCB ASSEMBLY DCコントローラ回路基板	FIGURE 930
21	PCB		RF	PAPER PICK-UP PCB ASSEMBLY 給紙回路基板	FIGURE 940
22	PCB		RF	IMAGE PROCESSOR PCB ASSEMBLY イメージ　プロセッサ回路基板	FIGURE 950
23	PCB		RF	LOW VOLTAGE PCB ASSEMBLY 低圧電源回路基板	FIGURE 105-22
24	PCB		RF	SYSTEM MOTHER PCB ASSEMBLY システム　マザー回路基板	FIGURE 991-11 FIGURE 995-6
25	PCB		RF	FAX BOARD PCB ASSEMBLY FAXボード回路基板	FIGURE 992
26	PCB		RF	NCU BOARD PCB ASSEMBLY NCUボード回路基板	FIGURE 992-2
27	PCB		RF	FUNCTION KEY PCB ASSEMBLY ファンクション　キー回路基板	FIGURE 130-31
28	PCB		RF	DRUM SENSOR PCB ASSEMBLY ドラム　センサ回路基板	FIGURE 105-19
29	PCB		RF	HUMIDITY SENSOR PCB ASSEMBLY 湿度センサ回路基板	FIGURE 210-41

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
900 - 30	PCB		RF	CCD/ANALOG PROCESSOR PCB ASS'Y CCD／アナログ プロセッサ回路基板	FIGURE 210-33
31	PCB		RF	PRI. BIAS CONNECTING PCB ASS'Y 一次バイアス中継回路基板	FIGURE 105-11
32	PCB		RF	PS/PCL PRINTER BOARD PCB ASS'Y PS／PCLプリンタ ボード回路基板	SEE ACCESSORY FIGURE F90-6
	PCB		RF	LIPS PRINTER BOARD PCB ASS'Y LIPSプリンタ ボード回路基板	SEE ACCESSORY FIGURE U90
33	PCB		RF	PRINTER MOTHER PCB ASSEMBLY プリンタ マザー回路基板	SEE ACCESSORY FIGURE F90-10 FIGURE U90-3
34	PCB		RF	PDL INTERFACE PCB ASSEMBLY PDLインターフェース回路基板	SEE ACCESSORY FIGURE F95 FIGURE U95
35	PCB		RF	BATTERY BOARD PCB ASSEMBLY バッテリ ボード回路基板	SEE ACCESSORY FIGURE F97 FIGURE G10-14 FIGURE G12-7
36	PCB		RF	MODULAR JACK PCB ASSEMBLY モジュラ ジャック回路基板	SEE ACCESSORY FIGURE G10-12 FIGURE G12-6
37	PCB		RF	SYSTEM MOTHER PCB ASSEMBLY システム マザー回路基板	SEE ACCESSORY FIGURE G10-13 FIGURE G11-7
38	PCB		RF	FAX BOARD PCB ASSEMBLY FAXボード回路基板	SEE ACCESSORY FIGURE G90,92
39	PCB		RF	NCU BOARD PCB ASSEMBLY NCUボード回路基板	SEE ACCESSORY FIGURE G90-2 FIGURE G92-2
40	PCB		RF	MODEM PCB ASSEMBLY モデム回路基板	SEE ACCESSORY FIGURE G95-1
41	PCB		RF	NCU BOARD PCB ASSEMBLY NCUボード回路基板	SEE ACCESSORY FIGURE G95-3
42	PCB		RF	ETHERNET BOARD PCB ASSEMBLY イーサネット ボード回路基板	SEE ACCESSORY FIGURE N90
43	PCB		RF	SCSI BOARD PCB ASSEMBLY SCSIボード回路基板	SEE ACCESSORY FIGURE Y90

FIGURE 910 DC POWER SUPPLY PCB ASSEMBLY 複合電源回路基板

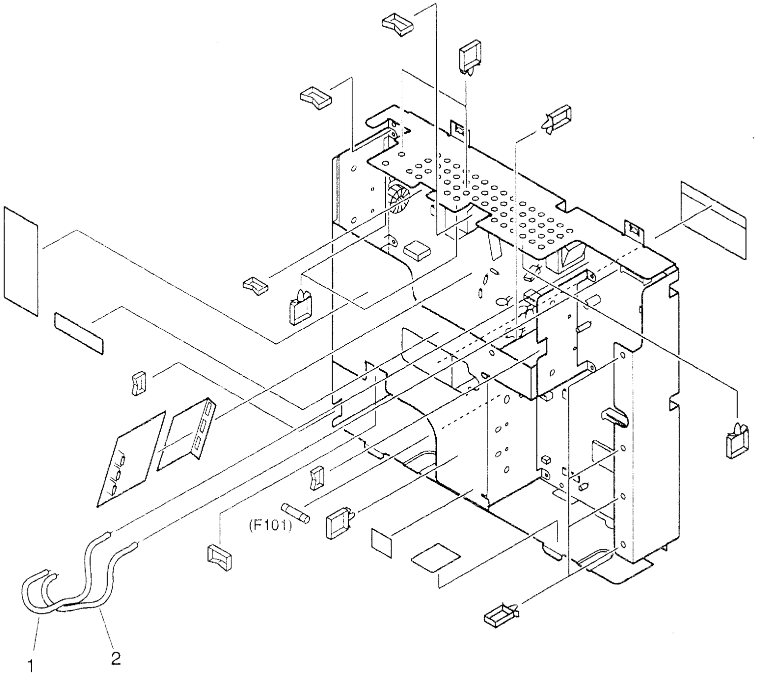
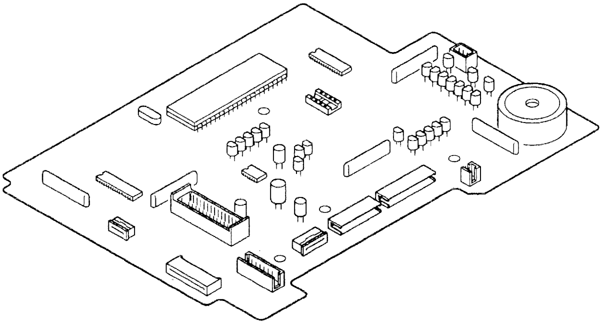


FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
910 -	FG6 − 0508 − 000		1	DC POWER SUPPLY PCB ASSEMBLY 複合電源回路基板	100V
	FG6 − 0530 − 000		1	DC POWER SUPPLY PCB ASSEMBLY 複合電源回路基板	120V
	FG6 − 0531 − 000		1	DC POWER SUPPLY PCB ASSEMBLY 複合電源回路基板	220/240V
1	FF3 − 2940 − 000		1	CABLE, HIGH VOLTAGE, H 高圧束線（H）	
2	FF3 − 2941 − 000		1	CABLE, HIGH VOLTAGE, L 高圧束線（L）	
F101	VD7 − 0218 − 001		1	FUSE, 125V, 8A ヒューズ	100/120V
	VD7 − 0644 − 001		1	FUSE, 250V, 4A ヒューズ	220/240V
L101	RH6 − 3032 − 000		1	COIL, 1MH, 10A コイル	100/120V
	FH6 − 3362 − 000		1	COIL, 8MH, 4A コイル	220/240V
L201	FH3 − 0849 − 000		1	INDUCTOR インダクタ	
L701	FH3 − 7165 − 000		1	INDUCTOR インダクタ	
Q605	FH4 − 1316 − 000		1	IC, UPD18001CW-538, MPU MPU	
R304	FH4 − 9169 − 000		1	RESISTOR, 44MOHM, 0.091W 抵抗	
R417	FH4 − 9163 − 000		1	RESISTOR, 2MOHM, 0.85W 抵抗	
R440	FH4 − 9200 − 000		1	RESISTOR, 180MOHM, 0.8W 抵抗	
R507	FH4 − 9199 − 000		1	RESISTOR, 80MOHM, 0.8W 抵抗	
RA400	FH4 − 9158 − 000		1	RESISTOR, 100KOHM, 1/6W 抵抗	
T101	FH3 − 0804 − 000		1	TRANSFORMER, CONVERTER コンバータ　トランス	100/120V
	FH3 − 0805 − 000		1	TRANSFORMER, CONVERTER コンバータ　トランス	220/240V
T102	FH3 − 0667 − 000		1	TRANSFORMER トランス	
T103	FH3 − 0713 − 000		1	TRANSFORMER トランス	100/120V
	FH3 − 0714 − 000		1	TRANSFORMER トランス	220/240V
T104	FH3 − 0665 − 000		1	TRANSFORMER トランス	100/120V
	FH3 − 0666 − 000		1	TRANSFORMER トランス	220/240V
T201	FH3 − 0668 − 000		1	TRANSFORMER トランス	
T300	FH3 − 0882 − 000		1	TRANSFORMER トランス	
T400	FH3 − 5222 − 000		1	TRANSFORMER トランス	
T502	FH3 − 5223 − 000		1	TRANSFORMER トランス	
T701	FH3 − 0821 − 000		1	TRANSFORMER トランス	

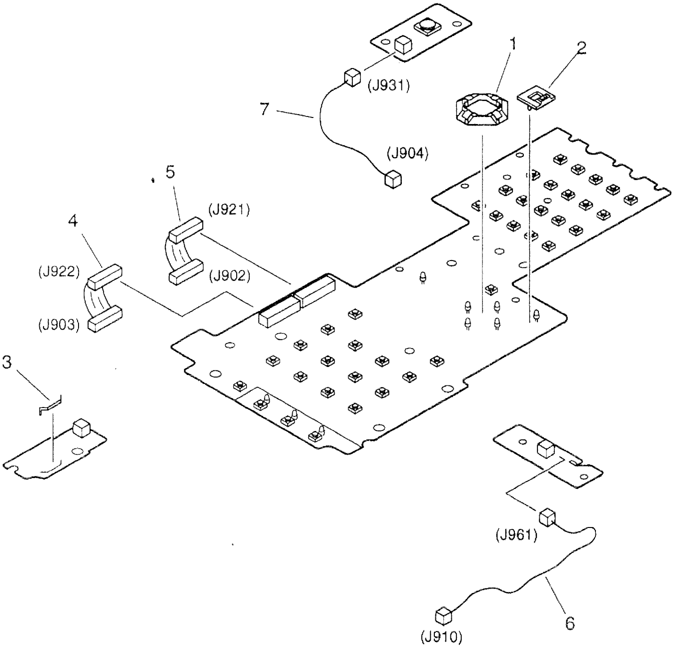
FIGURE 920 CONTROL PANEL CPU PCB ASSEMBLY 操作CPU回路基板



NOTE:This assembly is included in the assembly shown in Figure 130.
注：このユニットはFigure130のユニットに含まれます。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
920 -	FG2 − 9635 − 000	N	1	CONTROL PANEL CPU PCB ASSEMBLY 操作CPU回路基板	SEE NOTE
BZ901	WR1 − 0055 − 000		1	BUZZER, PKB24SP-3301 ブザー	
Q919	FH4 − 3738 − 000		1	IC, MB89636RP-G-551-SH, MPU マイクロ コンピュータ	

FIGURE 925 CONTROL PANEL KEY PCB ASSEMBLY 操作キー回路基板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(J961)
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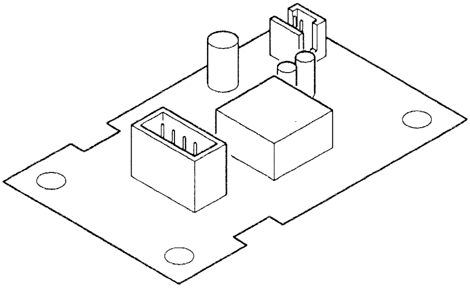
(J910)

NOTE:This assembly is included in the assembly shown in Figure 130.
注：このユニットはFigure130のユニットに含まれます。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
925 -	FG6 – 0497 – 000	N	1	CONTROL PANEL KEY PCB ASSEMBLY 操作キー回路基板	SEE NOTE
1	FB2 – 7575 – 000		1	HOLDER, LED LEDホルダ	
2	FB2 – 7576 – 000		1	HOLDER, LED LEDホルダ	
3	FB4 – 3001 – 000		1	PLATE, GROUNDING アース板	
4	FG2 – 9637 – 000		1	CABLE, CONTROL PANEL, 1 操作部束線 (1)	
5	FG2 – 9638 – 000		1	CABLE, CONTROL PANEL, 2 操作部束線 (2)	
6	FG2 – 9639 – 000		1	CABLE, CONTROL PANEL, 3 操作部束線 (3)	
7	FG2 – 9640 – 000		1	CABLE, CONTROL PANEL, 4 操作部束線 (4)	
LED901	WG1 – 5301 – 000		1	LED, SEL6410E LED	
LED902	WG1 – 5301 – 000		1	LED, SEL6410E LED	
LED903	WG1 – 5301 – 000		1	LED, SEL6410E LED	
LED907	FH6 – 0768 – 000		1	LED UNIT LED ユニット	
LED908	FH6 – 0768 – 000		1	LED UNIT LED ユニット	
LED909	FH6 – 0767 – 000		1	LED UNIT LED ユニット	
LED910	FH6 – 0767 – 000		1	LED UNIT LED ユニット	
LED911	WG1 – 5301 – 000		1	LED, SEL6410E LED	
LED998	WG1 – 0487 – 000		1	LED, GL3EG8 LED	
VR941	FH6 – 0745 – 000		1	RESISTOR, VARIABLE 可変抵抗	

FIGURE 926 INVERTER PCB ASSEMBLY インバータ回路基板



NOTE:This assembly is included in the assembly shown in Figure 130.
注：このユニットはFigure130のユニットに含まれます。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
926 -	FG2 − 9721 − 000		1	INVERTER PCB ASSEMBLY インバータ回路基板	SEE NOTE
F 1	VD5 − 0321 − 001		1	FUSE, 125V, 1A ヒューズ	
T 1	FH3 − 0775 − 000		1	TRANSFORMER, INVERTER インバータ　トランス	

FIGURE 930 DC CONTROLLER PCB ASSEMBLY
DCコントローラ回路基板

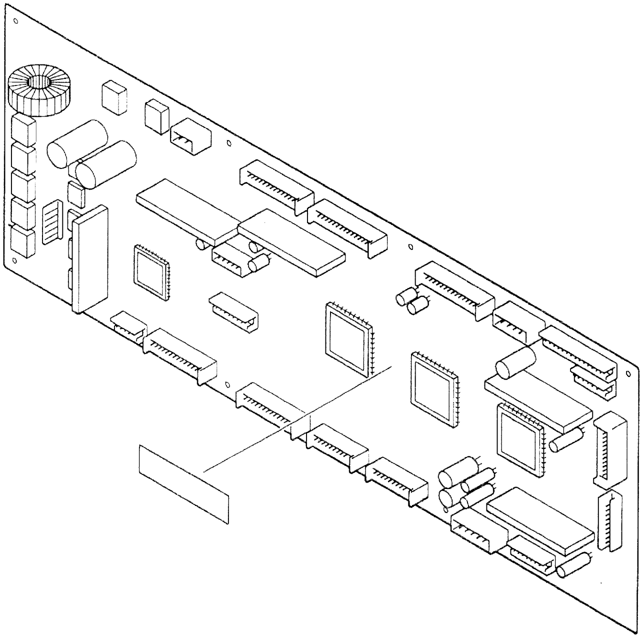
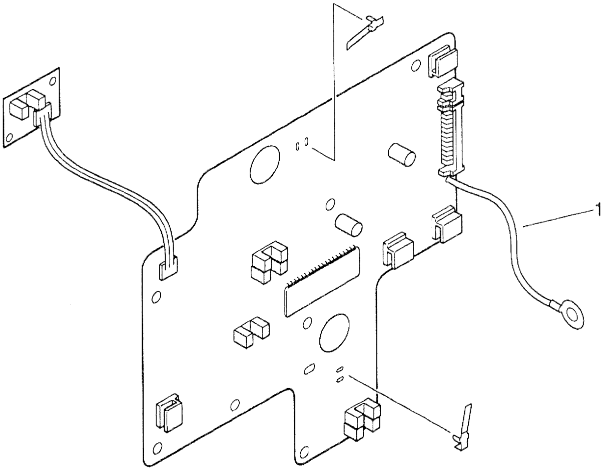


FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
930 -	FG2 – 9509 – 000		1	DC CONTROLLER PCB ASSEMBLY DCコントローラ回路基板	
FU200	VD7 – 2048 – 001		1	FUSE, 125V, 8A ヒューズ	
FU201	VD7 – 0623 – 000		1	FUSE, 125A, 3A ヒューズ	
FU202	VD7 – 2048 – 001		1	FUSE, 125V, 8A ヒューズ	
FU203	VD7 – 0622 – 001		1	FUSE, 125V, 2A ヒューズ	
FU204	VD7 – 0622 – 001		1	FUSE, 125V, 2A ヒューズ	
FU206	VD7 – 0622 – 001		1	FUSE, 125V, 2A ヒューズ	
FU207	VD7 – 0622 – 001		1	FUSE, 125V, 2A ヒューズ	
IC213	FH4 – 5986 – 000		1	IC, TC160G16AF-1284, G. ARRAY ゲート アレイ	
IC214	FH4 – 5986 – 000		1	IC, TC160G16AF-1284, G. ARRAY ゲート アレイ	
IC215	FH4 – 5986 – 000		1	IC, TC160G16AF-1284, G. ARRAY ゲート アレイ	
IC225	FH4 – 6001 – 000		1	IC, MTD2003B-4101, DRIVER ドライバ IC	
IC226	FH4 – 6001 – 000		1	IC, MTD2003B-4101, DRIVER ドライバ IC	
IC227	FH4 – 6001 – 000		1	IC, MTD2003B-4101, DRIVER ドライバ IC	
IC228	FH4 – 6001 – 000		1	IC, MTD2003B-4101, DRIVER ドライバ IC	
LED200	WG1 – 5519 – 000		1	LED, SML-310DT LED	
LED201	WG1 – 5517 – 000		1	LED, SML-310MT LED	

FIGURE 940 PAPER PICK-UP PCB ASSEMBLY 給紙回路基板



NOTE:This assembly is included in the assembly shown in Figure 310.
注：このユニットはFigure310のユニットに含まれます。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
940 -	FG6 − 0455 − 000		1	PAPER PICK-UP PCB ASSEMBLY 給紙回路基板	SEE NOTE
1	FF3 − 1168 − 000		1	CABLE, GROUNDING アース束線	
FU1601	VD7 − 0792 − 501		1	FUSE, 2.5A 125V ヒューズ	
IC1601	FH4 − 6002 − 000		1	IC, MTD2003B-4102, DRIVER ドライバ IC	
Q1604	FH9 − 0585 − 000		1	PHOTO-INTERRUPTER フォトインタラプタ	
Q1605	FH9 − 0585 − 000		1	PHOTO-INTERRUPTER フォトインタラプタ	
Q1606	FH9 − 0585 − 000		1	PHOTO-INTERRUPTER フォトインタラプタ	
Q1607	FH9 − 0585 − 000		1	PHOTO-INTERRUPTER フォトインタラプタ	
Q1608	FH9 − 0585 − 000		1	PHOTO-INTERRUPTER フォトインタラプタ	
Q1609	FH9 − 0585 − 000		1	PHOTO-INTERRUPTER フォトインタラプタ	

FIGURE 950 IMAGE PROCESSOR PCB ASSEMBLY イメージ　プロセッサ回路基板

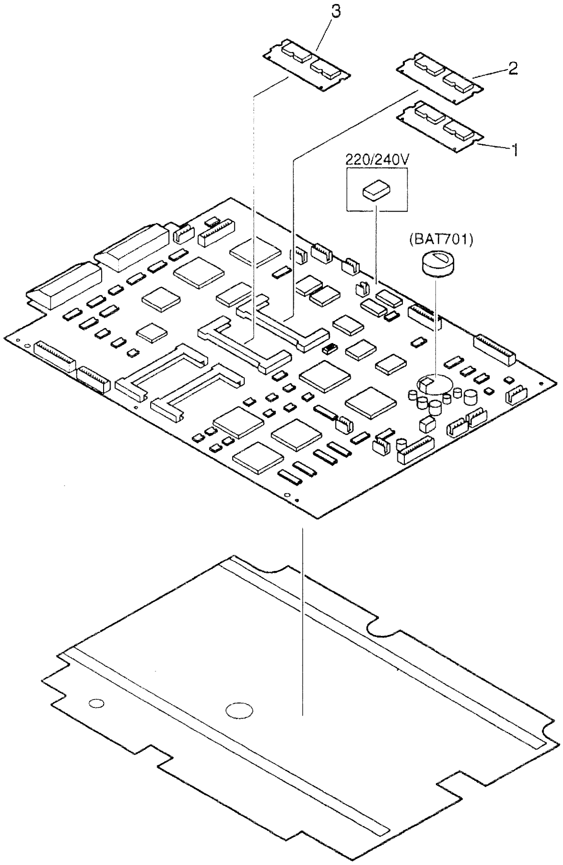
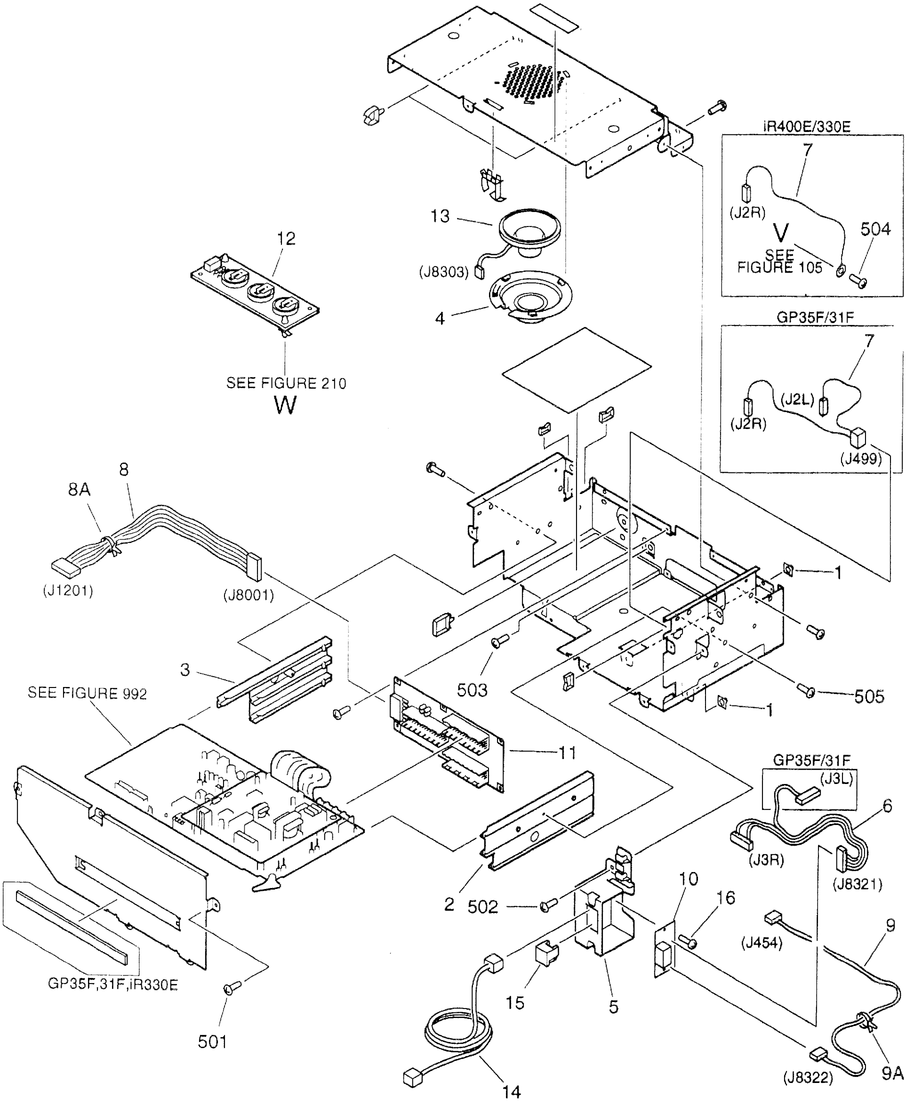

3
2
1
220/240V
(BAT701)

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
950 -	FG3 – 0284 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP405 JAPANESE
	FG3 – 0287 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP405 ITALIAN
	FG3 – 0147 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP405 ENGLISH PNW
	FG3 – 0289 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP405 ENGLISH QNY
	FG3 – 0291 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP405 ENGLISH RNX
	FG3 – 0292 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP405 FRENCH
	FG3 – 0294 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP405 GERMAN
	FG3 – 0500 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP405 ENGLISH UNY
	FG3 – 0285 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP355 JAPANESE
	FG3 – 0288 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP335 ITALIAN
	FG3 – 0638 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP335 ENGLISH PNX
	FG3 – 0290 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP335 ENGLISH QNZ
	FG3 – 0639 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP335 ENGLISH RNY
	FG3 – 0293 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP335 FRENCH
	FG3 – 0296 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP335 GERMAN
	FG3 – 0295 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP335 ENGLISH UNZ
	FG3 – 0286 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP315 JAPANESE
	FG2 – 9700 – 050		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP40 JAPANESE
	FG3 – 0135 – 050		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP35F JAPANESE GP35 JAPANESE
	FG3 – 0136 – 050		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	GP31F JAPANESE GP31 JAPANESE
	FG3 – 0146 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	iR400E ENGLISH NNU iR400S ENGLISH NNV
	FG3 – 0637 – 000		1	IMAGE PROCESSOR PCB ASSEMBLY イメージ プロセッサ回路基板	iR330E ENGLISH NNX iR330S ENGLISH NNY
1	FG3 – 0297 – 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP405 JAPANESE 4M BYTE
	FG3 – 0300 – 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP405 ITALIAN 4M BYTE
	FG2 – 9503 – 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP405 ENGLISH PNW 4M BYTE
	FG3 – 0302 – 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP405 ENGLISH QNY 4M BYTE
	FG3 – 0304 – 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP405 ENGLISH RNX 4M BYTE
	FG3 – 0305 – 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP405 FRENCH 4M BYTE
	FG3 – 0307 – 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP405 GERMAN 4M BYTE
	FG3 – 0501 – 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP405 ENGLISH UNY 4M BYTE

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
950 - 1	FG3 - 0298 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP355 JAPANESE 4M BYTE
	FG3 - 0301 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP335 ITALIAN 4M BYTE
	FG3 - 0635 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP335 ENGLISH PNX 4M BYTE
	FG3 - 0303 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP335 ENGLISH QNZ 4M BYTE
	FG3 - 0636 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP335 ENGLISH RNY 4M BYTE
	FG3 - 0306 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP335 FRENCH 4M BYTE
	FG3 - 0309 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP335 GERMAN 4M BYTE
	FG3 - 0308 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP335 ENGLISH UNZ 4M BYTE
	FG3 - 0299 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP315 JAPANESE 4M BYTE
	FG2 - 9501 - 160		1	DIMM, IP CONTROLLER EXTENSION IPコントローラ拡張 DIMM	GP40 JAPANESE 4M BYTE
	FG3 - 0139 - 060		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP35F,35 JAPANESE 4M BYTE
	FG3 - 0140 - 060		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP31F,31 JAPANESE 4M BYTE
	FG2 - 9502 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	iR400E 4M BYTE iR400S 4M BYTE
	FG3 - 0634 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	iR330E 4M BYTE iR330S 4M BYTE
2	FG3 - 0310 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GP405,355,315 JAPANESE 1M BYTE
	FG3 - 0311 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	ITALIAN 1M BYTE
	FG3 - 0499 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	ENGLISH PNW,PNX 1M BYTE
	FG3 - 0312 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	ENGLISH QNY,QNZ 1M BYTE
	FG3 - 0313 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	ENGLISH RNX,RNY 1M BYTE
	FG3 - 0495 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	FRENCH 1M BYTE
	FG3 - 0496 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	GERMAN 1M BYTE
	FG3 - 0497 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	ENGLISH UNY,UNZ 1M BYTE
	FG3 - 0498 - 000		1	FLASH MEMORY PCB UNIT フラッシュ メモリ回路ユニット	iR400E,400S iR330E,330S 1M BYTE
3	FG3 - 0504 - 000		1	FLASH MEMORY PCB ASSEMBLY フラッシュ メモリ回路ユニット	GP405,355,335,315 iR400E,400S iR330E,330S 1M BYTE
	FG2 - 9504 - 140		1	DIMM, DC CONTROLLER EXTENSION DCコントローラ拡張 DIMM	GP40,35F,35,31F,31 1M BYTE
BAT701	WK1 - 5019 - 000		1	BATTERY,LITHIUM,CR2477-HE4H 3V バッテリ	
FU701	VD7 - 2046 - 301		1	FUSE, 125V, 6.3A ヒューズ	
FU702	VD7 - 2046 - 301		1	FUSE, 125V, 6.3A ヒューズ	
IC711	FH4 - 5985 - 000		1	IC, M66389FP, GATE ARRAY ゲート アレイ	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
950 - I C712	FH4 – 6004 – 000		1	IC, HG73C047HF, GATE ARRAY ゲート アレイ	GP405,355,335,315 iR400E,400S iR330E,330S
	FH4 – 5984 – 000		1	IC, HG73C009HF, GATE ARRAY ゲート アレイ	GP40,35F,35,31F,31
I C713	FH4 – 6003 – 000		1	IC, HG73C004AHF, GATE ARRAY ゲート アレイ	GP405,355,335,315 iR400E,400S iR330E,330S
	FH4 – 5983 – 000		1	IC, HG73C004HF, GATE ARRAY ゲート アレイ	GP40,35F,35,31F,31
I C717	FH4 – 3702 – 000		1	IC, HD6432653BA12F, MPU マイクロ コンピュータ	
I C730	FH4 – 5560 – 000		1	IC, M38881M2-010GP, MCU MCU	
I C733	FH4 – 5981 – 000		1	IC, UPD97253GD, GATE ARRAY ゲート アレイ	
I C737	FH4 – 5999 – 000		1	IC, TC170G26CF-7075, G. ARRAY ゲート アレイ	
I C747	FH4 – 5980 – 000		1	IC, SLA3030F1A-01, GATE ARRAY ゲート アレイ	
I C748	FH4 – 3702 – 000		1	IC, HD6432653BA12F, MPU マイクロ コンピュータ	
I C750	FH4 – 5952 – 000		1	IC, UPD65636GB, GATE ARRAY ゲート アレイ	
I C772	FH9 – 0634 – 000		1	IC, W42C31-09(G DOT), DRIVER ドライバ IC	
I C775	FH4 – 6053 – 000		1	IC, XC9536-10VQ44C2, G. ARRAY ゲート アレイ	

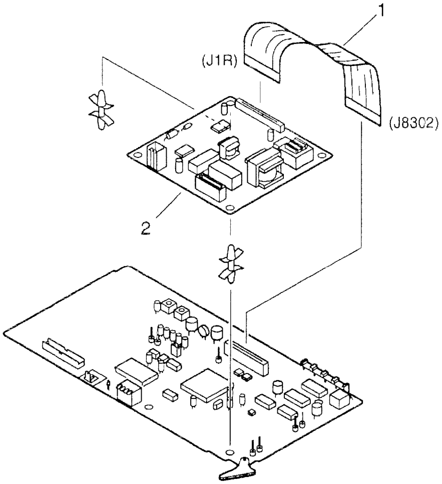
FIGURE 991 FAX ASSEMBLY (GP35F/31F/iR400E/330E)
FAX部（GP35F／31F／iR400E／330E）


iR400E/330E
7
(J2R)
V
SEE FIGURE 105
504
GP35F/31F
7
(J2L)
(J2R)
(J499)
13
(J8303)
4
12
SEE FIGURE 210
W
8A
8
(J1201)
(J8001)
1
1
505
503
3
SEE FIGURE 992
11
GP35F/31F
(J3L)
6
(J3R)
(J8321)
2
502
10
16
(J454)
9
15
5
GP35F,31F,iR330E
501
14
(J8322)
9A

NOTE1:This assembly includes the assembly shown in Figure 992.
NOTE2:This assembly does not include the parts shown with key No.5,10,12,14,15,16,502 and 504.
注1：このユニットはFigure992のユニットを含みます。
注2：このユニットにKey No. 5、10、12、14、15、16、502、504の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
991 -	FG6 − 0510 − 000		1	FAX ASSEMBLY FAX部	GP35F,31F SEE NOTE 1
	FG6 − 0599 − 000		1	FAX ASSEMBLY FAX部	iR400E,330E SEE NOTE 1
1	FA9 − 1800 − 000		2	CUP カップ	
2	FB4 − 3014 − 000		1	RAIL, 1 レール (1)	
3	FB4 − 3015 − 000		1	RAIL, 2 レール (2)	
4	FB4 − 3033 − 000		1	HOLDER, SPEAKER スピーカ　ホルダ	
5	FB4 − 3035 − 000		1	HOLDER, MODULAR JACK モジュラ　ジャック　ホルダ	SEE NOTE 2
6	FF3 − 2889 − 000		1	CABLE, MODULAR モジュラ束線	GP35F,31F J3R,3L,8321
	FF3 − 3623 − 000		1	CABLE, MODULAR モジュラ束線	iR400E,330E J3R,8321
7	FF3 − 2891 − 000		1	CABLE, ARESTA GROUNDING アレスタ　アース中継束線	GP35F,31F J2R,2L,499
	FF3 − 3622 − 000		1	CABLE, ARESTA GROUNDING アレスタ　アース中継束線	iR400E,330E J2R
8	FF3 − 3000 − 000		1	CABLE, S. MOTHER POWER SUPPLY システム　マザー電源束線	J1201,8001
8 A	WT2 − 5565 − 000		1	CLAMP, CABLE ソクセン　オサエ	
9	FF3 − 3008 − 000		1	CABLE, HAND SET CONNECTING ハンド　セット中継束線	J454,8322
9 A	WT2 − 5565 − 000		1	CLAMP, CABLE ソクセン　オサエ	
10	FG2 − 9517 − 000		1	MODULAR JACK PCB UNIT モジュラ　ジャック回路基板	SEE NOTE 2
11	FG2 − 9526 − 000		1	SYSTEM MOTHER PCB ASSEMBLY システム　マザー回路基板	
12	FG6 − 3888 − 000		1	BATTERY BOARD PCB ASSEMBLY バッテリ　ボード回路基板	SEE NOTE 2
13	FH6 − 3857 − 000		1	SPEAKER スピーカ	J8303
14	HH2 − 2484 − 000		1	CABLE, MODULAR モジュラ束線	SEE NOTE 2
15	WS9 − 5038 − 000		1	SPACER, MODULAR モジュラ　スペーサ	SEE NOTE 2
16	XA9 − 0591 − 000		2	SCREW,M3X8 タイト　ネジ	SEE NOTE 2
501	XB1 − 2300 − 606		12	SCREW,MACH.,TRUSS HEAD,M3X6 バインド　ネジ	
502	XB1 − 2300 − 606		1	SCREW,MACH.,TRUSS HEAD,M3X6 バインド　ネジ	SEE NOTE 2
503	XB2 − 7400 − 607		3	SCREW,W/WASHER,M4X6 バネツキ　バインド　ネジ	
504	XB2 − 7400 − 607		1	SCREW,W/WASHER,M4X6 バネツキ　バインド　ネジ	SEE NOTE 2 iR400E,330E
505	XB4 − 7300 − 806		2	SCREW,TAPPING,TRUSS HEAD,M3X8 バインド　タッピン　ネジ	

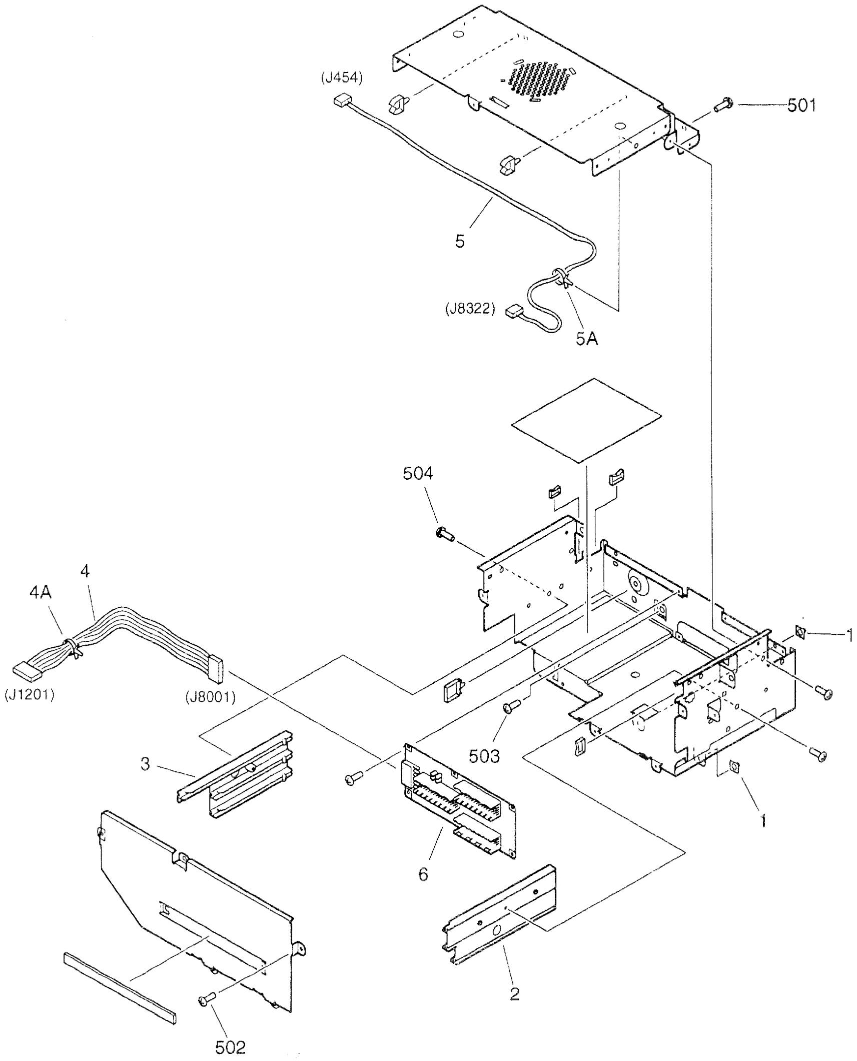
FIGURE 992 FAX BOARD PCB ASSEMBLY (GP35F/31F/iR400E/330E)
FAXボード回路基板 （GP35F／31F／iR400E／330E）



NOTE:This assembly is included in the assembly shown in Figure 991.
注：このユニットはFigure991のユニットに含まれます。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
992 -	FG2 − 9698 − 000		1	FAX BOARD PCB ASSEMBLY FAXボード回路基板	GP35F,31F SEE NOTE
	FG3 − 0232 − 000		1	FAX BOARD PCB ASSEMBLY FAXボード回路基板	iR400E,330E SEE NOTE
1	FH2 − 6341 − 000		1	CABLE, FCC FFC束線	J1R,8302
2	HG5 − 1039 − 000		1	NCU BOARD PCB ASSEMBLY NCUボード回路基板	GP35F,31F
	HG1 − 4268 − 000		1	NCU BOARD PCB ASSEMBLY NCUボード回路基板	iR400E,330E
FU1	VD7 − 0623 − 000		1	FUSE, 125A, 3A ヒューズ	
IC7	FH4 − 5982 − 000		1	IC, UPD65625GF-100, GATE ARRAY ゲート アレイ	
LED1	WG1 − 0373 − 000		1	LED, SEL2110R LED	

FIGURE 995 EXPANSION BOARD ASSEMBLY (GP405 RNX/GP335 RNY) 拡張ボード部 （GP405 RNX／GP335 RNY）



(J454)
501
5
5A
(J8322)
504
4
4A
(J1201)
(J8001)
1
503
3
1
6
2
502

NOTE:This assembly does not include the part shown with key No.502.
注：このユニットにKey No. 502の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
995 -	FG6 – 0505 – 000		1	EXPANSION BOARD ASSEMBLY 拡張ボード部	GP405 RNX GP335 RNY
1	FA9 – 1800 – 000		2	CUP カップ	
2	FB4 – 3014 – 000		1	RAIL, 1 レール（1）	
3	FB4 – 3015 – 000		1	RAIL, 2 レール（2）	
4	FF3 – 3000 – 000		1	CABLE, S. MOTHER POWER SUPPLY システム　マザー電源束線	J1201,8001
4A	WT2 – 5565 – 000		1	CLAMP, CABLE ソクセン　オサエ	
5	FF3 – 3008 – 000		1	CABLE, HAND SET CONNECTING ハンド　セット中継束線	J454,8322
5A	WT2 – 5565 – 000		1	CLAMP, CABLE ソクセン　オサエ	
6	FG2 – 9526 – 000		1	SYSTEM MOTHER PCB ASSEMBLY システム　マザー回路基板	
501	XB1 – 2300 – 606		12	SCREW,MACH.,TRUSS HEAD,M3X6 バインド　ネジ	
502	XB1 – 2300 – 606		5	SCREW,MACH.,TRUSS HEAD,M3X6 バインド　ネジ	SEE NOTE
503	XB2 – 7400 – 607		3	SCREW,W/WASHER,M4X6 バネツキ　バインド　ネジ	
504	XB4 – 7300 – 806		2	SCREW,TAPPING,TRUSS HEAD,M3X8 バインド　タッピン　ネジ	

FIGURE 999 HAND SET ASSEMBLY (GP35F/31F)
ハンド　セット部（GP35F／31F）

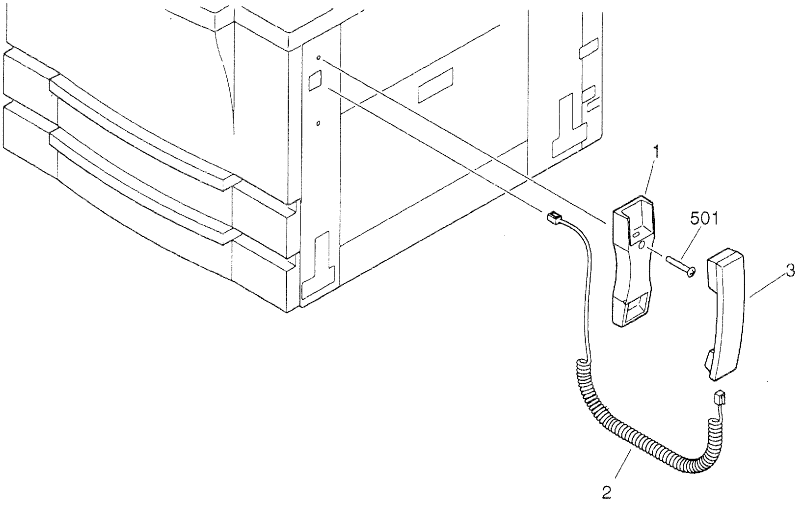


FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
999 -	NPN		RF	HAND SET ASSEMBLY ハンド　セット部	GP35F,31F
1	FB3 − 3177 − 020		1	HOLDER, HAND SET UNIT ハンド　セット台	
2	FH2 − 6471 − 000		1	CORD, CURL カール　コード	
3	HH7 − 2124 − 000		1	HAND SET UNIT CT−17ハンド　セット　ユニット	
501	XB1 − 2401 − 607		1	SCREW,MACH.,TRUSS HEAD,M4X16 バインド　ネジ	

FIGURE B LIST OF CONNECTORS(1/4)
コネクター覧(1/4)

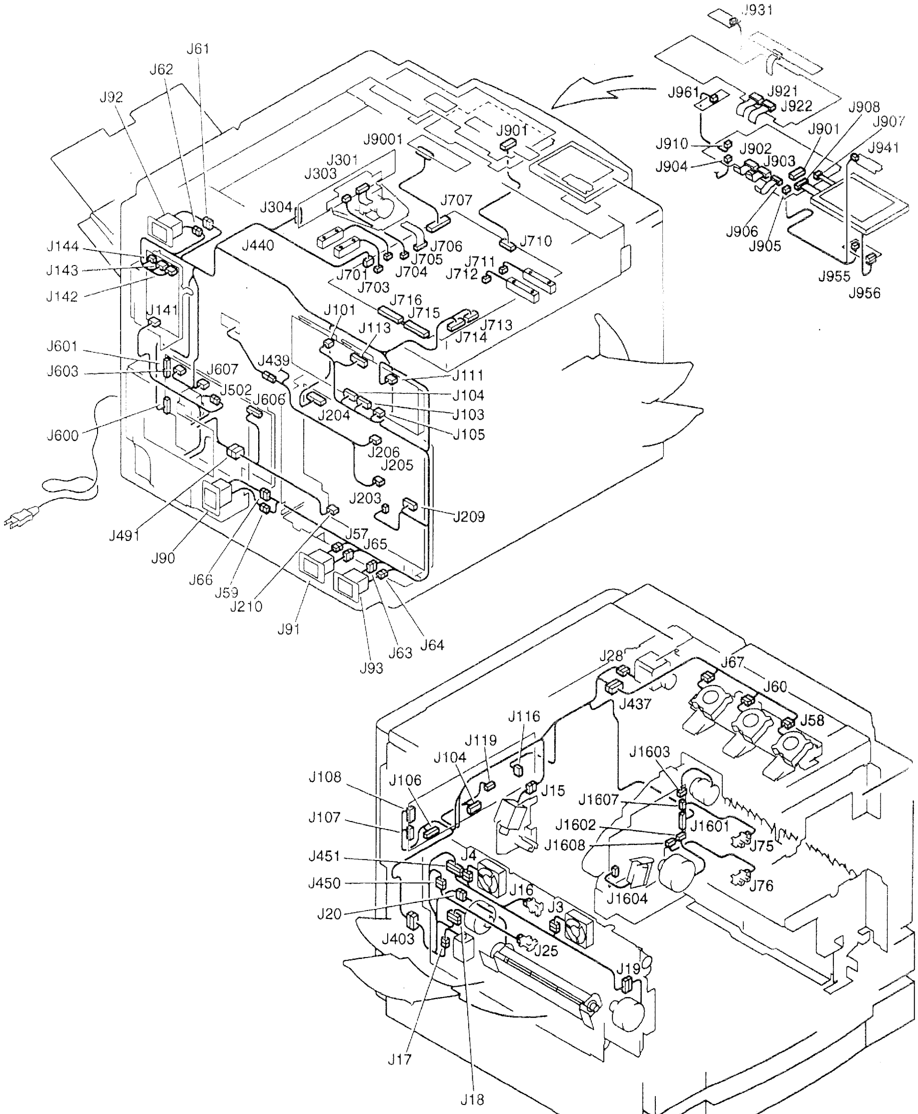
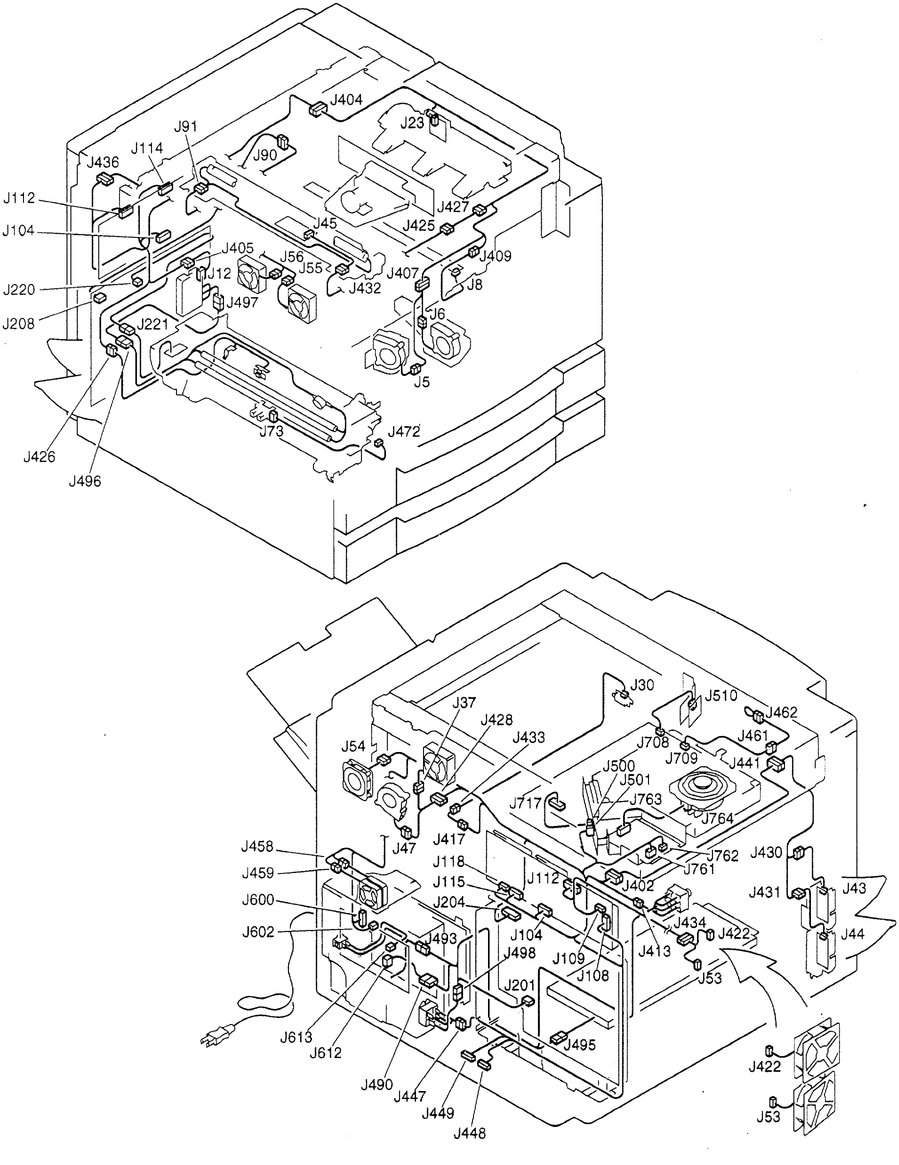

J931
J61
J62
J92
J961
J921
J922
J908
J907
J901
J910
J902
J941
J904
J903
J9001
J901
J301
J303
J304
J707
J906
J905
J955
J956
J440
J706
J710
J705
J144
J143
J142
J701
J704
J711
J712
J703
J716
J715
J101
J113
J713
J714
J141
J601
J603
J607
J439
J111
J502
J606
J104
J103
J105
J204
J600
J206
J205
J203
J209
J491
J57
J65
J90
J66
J59
J210
J91
J63
J64
J93
J28
J67
J437
J60
J58
J116
J119
J104
J1603
J108
J106
J15
J1607
J1602
J1601
J107
J1608
J75
J451
J4
J450
J16
J3
J76
J1604
J20
J403
J25
J19
J17
J18

FIGURE B LIST OF CONNECTORS(2/4) コネクター覧(2/4)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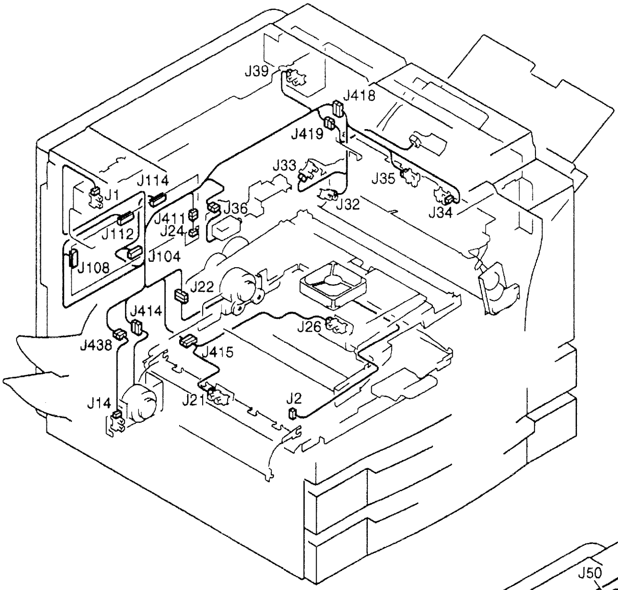
J12
J432
J8
J220
J497
J208
J221
J6
J5
J73
J472
J426
J496
J30
J510
J37
J462
J428
J433
J708
J709
J461
J54
J500
J441
J501
J763
J717
J764
J47
J417
J458
J762
J430
J118
J112
J761
J459
J115
J402
J43
J431
J600
J204
J434
J422
J104
J602
J493
J498
J109
J413
J44
J108
J53
J201
J613
J495
J612
J490
J447
J422
J449
J53
J448

FIGURE B LIST OF CONNECTORS(3/4)
コネクター一覧(3/4)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J35
J114
J1
J36
J32
J34
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J112
J24
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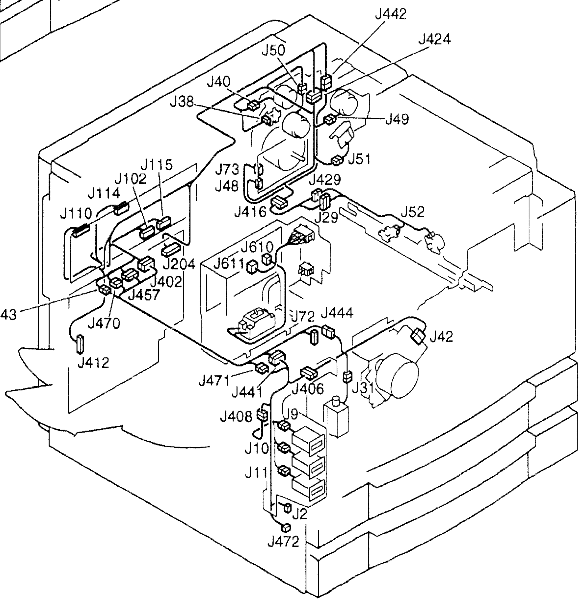
J22
J414
J26
J438
J415
J14
J21
J2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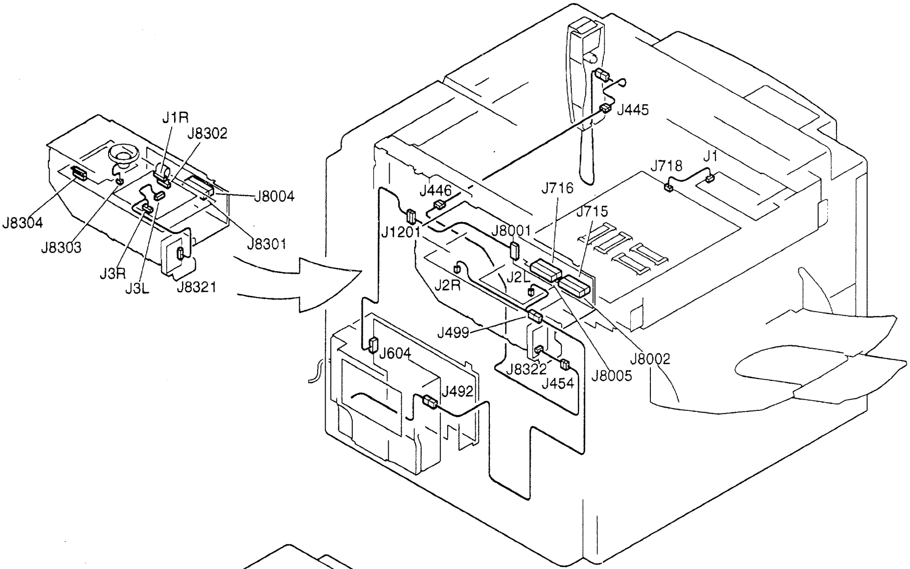
J416
J29
J52
J110
J610
J611
J204
J402
J457
J443
J470
J72
J444
J42
J412
J471
J441
J406
J31
J408
J9
J10
J11
J2
J472

FIGURE B LIST OF CONNECTORS(4/4) コネクタ一覧(4/4)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J8302
J8004
J8304
J8303
J8301
J3R
J3L
J8321
J445
J718
J1
J446
J716
J715
J1201
J8001
J2L
J2R
J499
J604
J8322
J454
J8005
J8002
J492

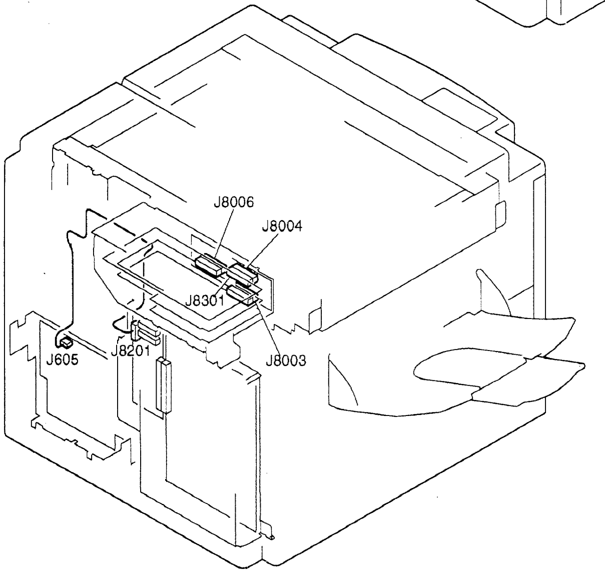
J8006
J8004
J8301
J605
J8201
J8003

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B -	NPN		RF	LIST OF CONNECTORS コネクタ一覧	
J 1	PCB			BATTERY BOARD バッテリ ボード	GP35F,31F iR400E,330E
	VS1 – 6314 – 006		1	CONNECTOR, 6P, FEMALE コネクタ （メス）	
	NPN			SCANNER HOME POSITION SENSOR スキャナ ホーム ポジション検知	PS1
	VS1 – 6320 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
J 1 R	PCB			NCU BOARD NCUボード	GP35F,31F iR400E,330E
	FH2 – 6341 – 000		1	CABLE, FCC FFC束線	GP35F,31F iR400E,330E
J 2	NPN			PAPER FEED FAN 搬送ファン	FM1
	VS1 – 5057 – 002		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 – 6321 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
J 2 L	PCB			NCU BOARD NCUボード	GP35F,31F
	WT1 – 5252 – 000		1	SLEEVE, FASTON ワンタッチ スリーブ	GP35F,31F
J 2 R	PCB			FAX BOARD FAXボード	GP35F,31F IR400E,330E
	WT1 – 5252 – 000		1	SLEEVE, FASTON ワンタッチ スリーブ	GP35F,31F IR400E,330E
J 3	NPN			FIXING EXHAUST FAN 1 定着排熱ファン (1)	FM2
	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
J 3 L	PCB			NCU BOARD NCUボード	GP35F,31F
	VS3 – 5080 – 005		1	CONNECTOR, 5P, MALE コネクタ （オス）	GP35F,31F
	WT1 – 5155 – 000		2	TERMINAL ターミナル	GP35F,31F
J 3 R	PCB			NCU BOARD NCUボード	GP35F,31F iR400E,330E
	VS3 – 5080 – 005		1	CONNECTOR, 5P, MALE コネクタ （オス）	GP35F,31F iR400E,330E
	WT1 – 5155 – 000		4	TERMINAL ターミナル	GP35F,31F iR400E,330E
J 4	NPN			FIXING EXHAUST FAN 2 定着排熱ファン (2)	FM3
	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
J 5	NPN			POLYGON COOLING FAN 1 ポリゴン冷却ファン (1)	FM5
	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
J 6	NPN			POLYGON COOLING FAN 2 ポリゴン冷却ファン (2)	FM6

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B - J 6	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 - 6321 - 003		1	CONNECTOR, 3P, FEMALE コネクタ (メス)	
J 8	PCB			PRE-CONDITIONING LAMP 前露光ランプ	
	VS1 - 0978 - 002		1	CONNECTOR, 2P, MALE コネクタ (オス)	
J 9	NPN			COUNTER 1 カウンタ (1)	CNT1
	VS1 - 5057 - 002		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 - 5824 - 002		1	CONNECTOR, 2P, FEMALE コネクタ (メス)	
	WS3 - 5358 - 000		2	SOCKET CONTACT, 22-26AWG ソケット コンタクト	
J 10	NPN			COUNTER 2 カウンタ (2)	120/220/240V CNT2
	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 - 5824 - 003		1	CONNECTOR, 3P, FEMALE コネクタ (メス)	
	WS3 - 5358 - 000		2	SOCKET CONTACT, 22-26AWG ソケット コンタクト	
J 11	NPN			COUNTER 3 カウンタ (3)	120/220/240V CNT3
	VS1 - 0280 - 002		1	CONNECTOR, 2P, MALE コネクタ (オス)	
	WS3 - 5016 - 000		2	PIN CONTACT, 30-26AWG ピン コンタクト	
J 12	NPN			SSR SSR	SSR1
	VS3 - 0044 - 005		1	CONNECTOR, 5P, FEMALE コネクタ (メス)	
	WT1 - 0354 - 000		5	SOCKET, CONTACT, 18-28AWG ソケット コンタクト	
J 14	NPN			LEFT DOOR OPEN/CLOSE SENSOR 左ドア開閉検知	PS13
	VS1 - 6321 - 003		1	CONNECTOR, 3P, FEMALE コネクタ (メス)	
J 15	NPN			FIXING INLET LATCH SOLENOID 定着入口ラッチ ソレノイド	SL6
	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 - 6321 - 003		1	CONNECTOR, 3P, FEMALE コネクタ (メス)	
J 16	NPN			OUTER PAPER DELIVERY SENSOR 外排紙検知	PS7
	VS1 - 6321 - 003		1	CONNECTOR, 3P, FEMALE コネクタ (メス)	
J 17	NPN			DELIVERY FLAPPER SOLENOID 排紙フラッパ ソレノイド	SL2
	VS1 - 5057 - 002		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 - 6321 - 002		1	CONNECTOR, 2P, FEMALE コネクタ (メス)	
J 18	NPN			PAPER DELIVERY MOTOR 排紙モータ	M8
	VS1 - 5057 - 006		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J 18	VS1 – 6321 – 006		1	CONNECTOR, 6P, FEMALE コネクタ　（メス）	
J 19	NPN			PAPER REVERSE MOTOR 排紙反転モータ	M7
	VS1 – 5057 – 004		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 – 6321 – 004		1	CONNECTOR, 4P, FEMALE コネクタ　（メス）	
J 20	NPN			CURL RELEASE FAN カール取りファン	FM9
	VS1 – 5057 – 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 – 6321 – 002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
J 21	NPN			DUPLEXING INLET PAPER SENSOR 両面入口紙検知	PS8
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 22	NPN			LOWER PAPER FEEDER MOTOR 下搬送モータ	M6
	VS1 – 5057 – 004		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 – 6321 – 004		1	CONNECTOR, 4P, FEMALE コネクタ　（メス）	
J 23	NPN			HUMIDITY SENSOR 湿度センサ	HUS1
	VS1 – 6321 – 005		1	CONNECTOR, 5P, FEMALE コネクタ　（メス）	
J 24	PCB			DRUM TEMPERATURE SENSOR ドラム温度検知	
	VS1 – 0978 – 003		1	CONNECTOR, 3P, MALE コネクタ　（オス）	
J 25	NPN			INNER PAPER DELIVERY SENSOR 内排紙検知	PS6
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 26	NPN			PAPER REPICK-UP SENSOR 再給紙検知	PS9
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 28	NPN			SCANNER MOTOR スキャナ　モータ	M3
	VS1 – 0279 – 005		1	CONNECTOR, 5P, FEMALE コネクタ　（メス）	
	WS3 – 0437 – 000		5	SOCKET CONTACT, 20-30AWG ソケット　コンタクト	
J 29	NPN			REGIST. SENSOR CARRIER MOTOR レジスト　センサ移動モータ	M9
	VS1 – 5057 – 006		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 – 6321 – 006		1	CONNECTOR, 6P, FEMALE コネクタ　（メス）	
J 30	NPN			TONER SENSOR トナー検知	TS1
	FF3 – 1303 – 000		1	CABLE, TONER SENSOR トナー　センサ束線	
J 31	NPN			WEB SOLENOID ウェブ　ソレノイド	SL5
	VS1 – 5057 – 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B－ J 31	VS1－5824－002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
	WS3－5358－000		2	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 32	NPN			REGIST. FRONT PAPER SENSOR 2 レジスト前紙検知 (2)	PS11
	VS1－0842－003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 33	NPN			REGIST. FRONT PAPER SENSOR 1 レジスト前紙検知 (1)	PS4
	VS1－0842－003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 34	NPN			RIGHT DOOR OPEN/CLOSE SENSOR 右ドア開閉検知	PS12
	VS1－0842－003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 35	NPN			MULTI PAPER SENSOR マルチ紙検知	PS3
	VS1－0842－003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 36	NPN			ROLLER CLEANING SOLENOID 帯電ローラ清掃ソレノイド	SL4
	VS1－5057－002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1－6321－002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
J 37	NPN			LASER COOLING FAN レーザ冷却ファン	FM4
	VS1－5057－004		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1－6321－004		1	CONNECTOR, 4P, FEMALE コネクタ　（メス）	
J 38	NPN			WASTE TONER SENSOR 廃トナー検知	PS14
	VS1－6321－003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 39	NPN			COPYBOARD OPEN/CLOSE SENSOR 圧板開閉検知	PS2
	VS1－6320－003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 40	NPN			DEVELOPING CLUTCH 現像クラッチ	CL4
	VS1－5057－002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1－6321－002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
J 42	NPN			FIXING MOTOR 定着モータ	M2
	VS1－5824－007		1	CONNECTOR, 7P, FEMALE コネクタ　（メス）	
	WS3－5358－000		7	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 43	PCB			UPPER CASSETTE SIZE 上カセット　サイズ	
	VS1－0978－006		1	CONNECTOR, 6P, FEMALE コネクタ　（メス）	
J 44	PCB			LOWER CASSETTE SIZE 下カセット　サイズ	
	VS1－0978－006		1	CONNECTOR, 6P, FEMALE コネクタ　（メス）	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B - J 45	PCB			INTENSITY SENSOR 調光センサ	
	VS1 - 0279 - 005		1	CONNECTOR, 5P, FEMALE コネクタ　(メス)	
	WS3 - 0437 - 000		4	SOCKET CONTACT, 20-30AWG ソケット　コンタクト	
J 47	NPN			DC CONTROLLER COOLING FAN DCコントローラ冷却ファン	FM17
	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 - 6320 - 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
J 48	NPN			MAIN MOTOR メイン　モータ	M1
	VS1 - 6321 - 004		1	CONNECTOR, 4P, FEMALE コネクタ　(メス)	
J 49	NPN			MULTI PAPER PICK-UP CLUTCH マルチ給紙クラッチ	CL2
	VS1 - 5057 - 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 - 6321 - 002		1	CONNECTOR, 2P, FEMALE コネクタ　(メス)	
J 50	NPN			REGISTRATION CLUTCH レジスト　クラッチ	CL1
	VS1 - 5057 - 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 - 6321 - 002		1	CONNECTOR, 2P, FEMALE コネクタ　(メス)	
J 51	NPN			MULTI PLATE RELEASE SOLENOID マルチ中板解除ソレノイド	SL3
	VS1 - 5057 - 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 - 6321 - 002		1	CONNECTOR, 2P, FEMALE コネクタ　(メス)	
J 52	NPN			SIDE REGIST. PAPER SENSOR 横レジスト紙検知	PS10
	VS1 - 5824 - 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
	WS3 - 5358 - 000		3	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 53	NPN			SYSTEM COOLING FAN 1 システム冷却ファン (1)	FM7
	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 - 6321 - 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
J 54	NPN			SCANNER MOTOR COOLING FAN 光学モータ冷却ファン	FM18
	VS1 - 5057 - 004		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 - 6321 - 004		1	CONNECTOR, 4P, FEMALE コネクタ　(メス)	
J 55	NPN			READER COOLING FAN 1 リーダ冷却ファン (1)	FM12
	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 - 6321 - 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
J 56	NPN			READER COOLING FAN 2 リーダ冷却ファン (2)	FM13

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J 56	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 57	VS4 – 0001 – 004		1	CONNECTOR, 4P, MALE コネクタ　（オス）	
	VS4 – 0002 – 004		1	CONNECTOR, 4P, FEMALE コネクタ　（メス）	
	WS4 – 0217 – 000		4	SOCKET CONTACT, 22-18AWG ソケット　コンタクト	
	WS4 – 0219 – 000		4	PIN CONTACT, 18-22AWG ピン　コンタクト	
J 58	NPN			DRUM CARTRIDGE COOLING FAN 1 ドラム　カートリッジ冷却ファン (1)	FM14
	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 59	VS4 – 0001 – 004		1	CONNECTOR, 4P, MALE コネクタ　（オス）	
	VS4 – 0002 – 004		1	CONNECTOR, 4P, FEMALE コネクタ　（メス）	
	WS4 – 0217 – 000		2	SOCKET CONTACT, 22-18AWG ソケット　コンタクト	
	WS4 – 0218 – 000		2	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
	WS4 – 0219 – 000		4	PIN CONTACT, 18-22AWG ピン　コンタクト	
J 60	NPN			DRUM CARTRIDGE COOLING FAN 2 ドラム　カートリッジ冷却ファン (2)	FM15
	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 61	VS1 – 5824 – 005		1	CONNECTOR, 5P, FEMALE コネクタ　（メス）	
	VS1 – 6321 – 005		1	CONNECTOR, 5P, FEMALE コネクタ　（メス）	
	VS1 – 5057 – 005		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	WS3 – 5358 – 000		5	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 62	VS4 – 0001 – 006		1	CONNECTOR, 6P, MALE コネクタ　（オス）	
	VS4 – 0002 – 006		1	CONNECTOR, 6P, FEMALE コネクタ　（メス）	
	WS4 – 0217 – 000		4	SOCKET CONTACT, 22-18AWG ソケット　コンタクト	
	WS4 – 0219 – 000		4	PIN CONTACT, 18-22AWG ピン　コンタクト	
J 63	VS1 – 5824 – 005		1	CONNECTOR, 5P, FEMALE コネクタ　（メス）	
	VS1 – 6321 – 005		1	CONNECTOR, 5P, FEMALE コネクタ　（メス）	
	VS1 – 5057 – 005		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	WS3 – 5358 – 000		5	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 64	VS4 – 0001 – 006		1	CONNECTOR, 6P, MALE コネクタ　（オス）	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B - J 64	VS4 – 0002 – 006		1	CONNECTOR, 6P, FEMALE コネクタ （メス）	
	WS4 – 0217 – 000		4	SOCKET CONTACT, 22-18AWG ソケット コンタクト	
	WS4 – 0219 – 000		4	PIN CONTACT, 18-22AWG ピン コンタクト	
J 65	VS1 – 5824 – 007		1	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	VS1 – 6321 – 007		1	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	VS1 – 5057 – 007		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	WS3 – 5358 – 000		7	SOCKET CONTACT, 22-26AWG ソケット コンタクト	
J 66	VS1 – 5824 – 007		1	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	VS1 – 6321 – 007		1	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	VS1 – 5057 – 007		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	WS3 – 5358 – 000		7	SOCKET CONTACT, 22-26AWG ソケット コンタクト	
J 67	NPN			DRUM CARTRIDGE COOLING FAN 3 ドラム カートリッジ冷却ファン (3)	FM16
	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
J 72	SYS			CARD READER カード リーダ	ACCESSORY
	VS1 – 5057 – 009		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VS1 – 6321 – 009		1	CONNECTOR, 9P, FEMALE コネクタ （メス）	
J 73	NPN			MAIN MOTOR メイン モータ	M1
	VS3 – 5083 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
	NPN			FIXING PAPER OUTLET SENSOR 定着出口紙センサ	PS40
	VS1 – 5824 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	WS3 – 5358 – 000		3	SOCKET CONTACT, 22-26AWG ソケット コンタクト	
J 75	NPN			RETRY PAPER SENSOR 1 リトライ紙検知 (1)	PS18
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
J 76	NPN			RETRY PAPER SENSOR 2 リトライ紙検知 (2)	PS19
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
J 90	VS1 – 0279 – 005		1	CONNECTOR, 5P, FEMALE コネクタ （メス）	
	VS3 – 0108 – 005		1	CONNECTOR, 5P, MALE コネクタ （オス）	
	WS3 – 0437 – 000		4	SOCKET CONTACT, 20-30AWG ソケット コンタクト	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J 90	WS3 – 0885 – 000		4	PIN CONTACT, 20-30AWG ピン コンタクト	
	SYS			PAPER DECK PEDESTAL ペーパ デッキ ペディスタル	ACCESSORY
	FH2 – 6480 – 000		1	CONNECTOR, FEMALE コネクタ （メス）	
	VS1 – 5452 – 008		1	CONNECTOR, 8P, FEMALE コネクタ （メス）	
	WS3 – 5596 – 000		4	PIN CONTACT, 18-24AWG ピン コンタクト	
J 91	VS1 – 0279 – 005		1	CONNECTOR, 5P, FEMALE コネクタ （メス）	
	VS1 – 0280 – 005		1	CONNECTOR, 5P, MALE コネクタ （オス）	
	WS3 – 0437 – 000		4	SOCKET CONTACT, 20-30AWG ソケット コンタクト	
	WS3 – 0885 – 000		4	PIN CONTACT, 20-30AWG ピン コンタクト	
	SYS			CASSETTE PEDESTAL カセット ペディスタル	ACCESSORY
	FH2 – 6480 – 000		1	CONNECTOR, FEMALE コネクタ （メス）	
	VS1 – 5452 – 008		1	CONNECTOR, 8P, FEMALE コネクタ （メス）	
	WS3 – 5596 – 000		4	PIN CONTACT, 18-24AWG ピン コンタクト	
J 92	SYS			RDF RDF	ACCESSORY
	FH2 – 6480 – 000		1	CONNECTOR, FEMALE コネクタ （メス）	
	VS1 – 5452 – 007		1	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	WS3 – 5596 – 000		4	PIN CONTACT, 18-24AWG ピン コンタクト	
J 93	SYS			FINISHER フィニッシャ	ACCESSORY
	FH2 – 6480 – 000		1	CONNECTOR, FEMALE コネクタ （メス）	
	VS1 – 5452 – 007		1	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	WS3 – 5596 – 000		4	PIN CONTACT, 18-24AWG ピン コンタクト	
J 101	PCB			DC CONTROLLER DCコントローラ	
	VS3 – 5083 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 102	PCB			DC CONTROLLER DCコントローラ	
	VS1 – 6313 – 015		1	CONNECTOR, 15P, FEMALE コネクタ （メス）	
	VS1 – 6314 – 015		1	CONNECTOR, 15P, FEMALE コネクタ （メス）	
	VT2 – 5161 – 030		1	HOLDER, CONNECTOR, 30P コネクタ ホルダ	
J 103	PCB			DC CONTROLLER DCコントローラ	
	VS1 – 6313 – 012		1	CONNECTOR, 12P, FEMALE コネクタ （メス）	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B－ J 103	VS1 － 6314 － 012		1	CONNECTOR, 12P, FEMALE コネクタ (メス)	
	VT2 － 5161 － 024		1	HOLDER, CONNECTOR, 24P コネクタ ホルダ	
J 104	PCB			DC CONTROLLER DCコントローラ	
	VS1 － 6313 － 013		1	CONNECTOR, 13P, FEMALE コネクタ (メス)	
	VS1 － 6314 － 013		1	CONNECTOR, 13P, FEMALE コネクタ (メス)	
	VT2 － 5161 － 026		1	HOLDER, CONNECTOR, 26P コネクタ ホルダ	
J 105	PCB			DC CONTROLLER DCコントローラ	
	VS3 － 5083 － 005		1	CONNECTOR, 5P, FEMALE コネクタ (メス)	
	WS3 － 5160 － 000		5	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 106	PCB			DC CONTROLLER DCコントローラ	
	VS1 － 6314 － 013		1	CONNECTOR, 13P, FEMALE コネクタ (メス)	
J 107	PCB			DC CONTROLLER DCコントローラ	
	VS1 － 6314 － 014		1	CONNECTOR, 14P, FEMALE コネクタ (メス)	
J 108	PCB			DC CONTROLLER DCコントローラ	
	VS1 － 6313 － 018		1	CONNECTOR, 18P, FEMALE コネクタ (メス)	
	VS1 － 6314 － 018		1	CONNECTOR, 18P, FEMALE コネクタ (メス)	
	VT2 － 5161 － 036		1	HOLDER, CONNECTOR, 36P コネクタ ホルダ	
J 109	PCB			DC CONTROLLER DCコントローラ	
	VS1 － 6314 － 008		1	CONNECTOR, 8P, FEMALE コネクタ (メス)	
J 110	PCB			DC CONTROLLER DCコントローラ	
	VS1 － 6314 － 015		1	CONNECTOR, 15P, FEMALE コネクタ (メス)	
J 111	PCB			DC CONTROLLER DCコントローラ	
	VS3 － 5083 － 004		1	CONNECTOR, 4P, FEMALE コネクタ (メス)	
	WS3 － 5160 － 000		4	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 112	PCB			DC CONTROLLER DCコントローラ	
	VS1 － 6313 － 019		1	CONNECTOR, 19P, FEMALE コネクタ (メス)	
	VS1 － 6314 － 019		1	CONNECTOR, 19P, FEMALE コネクタ (メス)	
	VT2 － 5161 － 038		1	HOLDER, CONNECTOR, 38P コネクタ ホルダ	
J 113	PCB			DC CONTROLLER DCコントローラ	
	VS1 － 6313 － 020		1	CONNECTOR, 20P, FEMALE コネクタ (メス)	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J 113	VS1 - 6314 - 020		1	CONNECTOR, 20P, FEMALE コネクタ (メス)	
	VT2 - 5161 - 040		1	HOLDER, CONNECTOR, 40P コネクタ ホルダ	
J 114	PCB			DC CONTROLLER DCコントローラ	
	VS1 - 6313 - 016		1	CONNECTOR, 16P, FEMALE コネクタ (メス)	
	VS1 - 6314 - 016		1	CONNECTOR, 16P, FEMALE コネクタ (メス)	
	VT2 - 5161 - 032		1	HOLDER, CONNECTOR, 32P コネクタ ホルダ	
J 115	PCB			DC CONTROLLER DCコントローラ	
	VS1 - 6313 - 014		1	CONNECTOR, 14P, FEMALE コネクタ (メス)	
	VS1 - 6314 - 014		1	CONNECTOR, 14P, FEMALE コネクタ (メス)	
	VT2 - 5161 - 028		1	HOLDER, CONNECTOR, 28P コネクタ ホルダ	
J 116	PCB			DC CONTROLLER DCコントローラ	
	VS1 - 0279 - 005		1	CONNECTOR, 5P, FEMALE コネクタ (メス)	
	WS3 - 0437 - 000		5	SOCKET CONTACT, 20-30AWG ソケット コンタクト	
J 118	PCB			DC CONTROLLER DCコントローラ	
	VS1 - 6314 - 006		1	CONNECTOR, 6P, FEMALE コネクタ (メス)	
J 119	PCB			DC CONTROLLER DCコントローラ	
	VS1 - 6314 - 009		1	CONNECTOR, 9P, FEMALE コネクタ (メス)	
J 141	PCB			APC POWER SUPPLY APC電源	
	VS3 - 5083 - 005		1	CONNECTOR, 5P, FEMALE コネクタ (メス)	
	WS3 - 5160 - 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
	WT1 - 0246 - 000		2	SOCKET CONTACT, AWG22-18 ソケット コンタクト	
J 142	PCB			APC POWER SUPPLY APC電源	
	VS3 - 5083 - 004		1	CONNECTOR, 4P, FEMALE コネクタ (メス)	
	WS3 - 5160 - 000		4	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 143	PCB			APC POWER SUPPLY APC電源	
	VS3 - 5083 - 004		1	CONNECTOR, 4P, FEMALE コネクタ (メス)	
	WS3 - 5160 - 000		4	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 144	PCB			APC POWER SUPPLY APC電源	
	VS1 - 6321 - 002		1	CONNECTOR, 2P, FEMALE コネクタ (メス)	
J 201	PCB			DC POWER SUPPLY DC電源	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B – J 201	VS3 – 5083 – 005		1	CONNECTOR, 5P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 203	PCB			DC POWER SUPPLY DC電源	
	VS3 – 5083 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 204	PCB			DC POWER SUPPLY DC電源	
	VS3 – 5083 – 010		1	CONNECTOR, 10P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		10	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 205	PCB			DC POWER SUPPLY DC電源	
	VS3 – 5083 – 005		1	CONNECTOR, 5P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 206	PCB			DC POWER SUPPLY DC電源	
	VS3 – 5083 – 007		1	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 208	PCB			DC POWER SUPPLY DC電源	
	VS3 – 5083 – 005		1	CONNECTOR, 5P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		4	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 209	PCB			DC POWER SUPPLY DC電源	
	VS1 – 6320 – 012		1	CONNECTOR, 12P, FEMALE コネクタ （メス）	
	VS1 – 6321 – 012		1	CONNECTOR, 12P, FEMALE コネクタ （メス）	
	VT2 – 5162 – 024		1	HOLDER, CONNECTOR, 24P コネクタ ホルダ	
J 210	PCB			DC POWER SUPPLY DC電源	
	VS3 – 5083 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 220	PCB			DC POWER SUPPLY DC電源	
	WT1 – 5256 – 000		1	SLEEVE, FASTEN ファストン スリーブ	
	X62 – 5370 – 000		1	SOCKET, FASTEN 110, 20-24AWG ファストン リセプタクル	
J 221	VS4 – 0001 – 002		1	CONNECTOR, 2P, MALE コネクタ （オス）	
	VS4 – 0002 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	WS4 – 0217 – 000		1	SOCKET CONTACT, 22-18AWG ソケット コンタクト	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J 221	WS4 - 0219 - 000		1	PIN CONTACT, 18-22AWG ピン　コンタクト	
J 301	PCB			CCD CCD	
	FH2 - 6474 - 000		1	CABLE, FFC FFC束線	GP405,355,335,315 iR400E,400S iR330E,330S
	FH2 - 6470 - 000		1	CABLE, FFC FFC束線	GP40,35F,35,31F,31
J 303	PCB			CCD CCD	
	VS1 - 6313 - 003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	GP405,355,335,315 iR400E,400S iR330E,330S
	VS1 - 6314 - 002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	GP40,35F,35,31F,31
J 304	PCB			CCD CCD	
	VS3 - 5083 - 004		1	CONNECTOR, 4P, FEMALE コネクタ　（メス）	
	WS3 - 5160 - 000		4	SOCKET CONTACT, 18-24AWG ソケット　コンタクト	
J 402	VS1 - 6313 - 014		2	CONNECTOR, 14P, FEMALE コネクタ　（メス）	
	VS1 - 6314 - 014		2	CONNECTOR, 14P, FEMALE コネクタ　（メス）	
	VS1 - 6319 - 028		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VT2 - 5161 - 028		2	HOLDER, CONNECTOR, 28P コネクタ　ホルダ	
J 403	VS1 - 6313 - 013		2	CONNECTOR, 13P, FEMALE コネクタ　（メス）	
	VS1 - 6314 - 013		2	CONNECTOR, 13P, FEMALE コネクタ　（メス）	
	VS1 - 6319 - 026		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VT2 - 5161 - 026		2	HOLDER, CONNECTOR, 26P コネクタ　ホルダ	
J 404	VS1 - 6314 - 017		2	CONNECTOR, 17P, FEMALE コネクタ　（メス）	
	VS1 - 6318 - 017		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
J 405	VS1 - 0842 - 005		1	CONNECTOR, 5P, FEMALE コネクタ　（メス）	
	VS1 - 6320 - 005		1	CONNECTOR, 5P, FEMALE, コネクタ　（メス）	
	VS1 - 5057 - 005		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
J 406	VS1 - 5824 - 006		1	CONNECTOR, 6P, FAMALE コネクタ　（メス）	
	VS1 - 6321 - 006		1	CONNECTOR, 6P, FEMALE コネクタ　（メス）	
	VS1 - 5057 - 006		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	WS3 - 5358 - 000		5	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 407	VS1 - 6321 - 006		2	CONNECTOR, 6P, FEMALE コネクタ　（メス）	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B－ J 407	VS1 − 5057 − 006		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
J 408	VS1 − 5824 − 006		1	CONNECTOR, 6P, FAMALE コネクタ　（メス）	
	VS1 − 6321 − 006		1	CONNECTOR, 6P, FEMALE コネクタ　（メス）	
	VS1 − 5057 − 006		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	WS3 − 5358 − 000		6	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 409	VS1 − 0842 − 002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
	VS1 − 5057 − 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 − 6321 − 002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
J 411	VS1 − 0852 − 002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
	VS1 − 5057 − 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 − 6321 − 002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
J 412	SYS			SORTER ソータ	ACCESSORY
	VS1 − 6314 − 015		1	CONNECTOR, 15P, FEMALE コネクタ　（メス）	
	VS1 − 6318 − 015		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
J 413	VS1 − 0842 − 002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
	VS1 − 5057 − 002		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 − 6321 − 002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
J 414	NPN			DUPLEXING REVERSE MOTOR 両面反転モータ	M10
	VS1 − 5057 − 004		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 − 6321 − 004		1	CONNECTOR, 4P, FEMALE コネクタ　（メス）	
J 415	VS1 − 6321 − 006		2	CONNECTOR, 6P, FEMALE コネクタ　（メス）	
	VS1 − 5057 − 006		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
J 416	VS1 − 6321 − 009		2	CONNECTOR, 9P, FEMALE コネクタ　（メス）	
	VS1 − 5057 − 009		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
J 417	FF3 − 1136 − 000		1	CABLE, TONER SENSOR トナー　センサ中継束線	
	VS1 − 6321 − 003		1	CONNECTOR, 3P, FEMALE コネクタ　（メス）	
J 418	VS1 − 0842 − 012		1	CONNECTOR, 12P, FEMALE コネクタ　（メス）	
	VS1 − 5057 − 012		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 − 6321 − 012		1	CONNECTOR, 12P, FEMALE コネクタ　（メス）	
J 419	PCB			MULTI PAPER WIDTH SENSOR マルチ紙幅検知	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J 419	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
J 422	NPN			SYSTEM COOLING FAN 2 システム冷却ファン (2)	FM8
	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
J 424	VS1 – 6313 – 012		2	CONNECTOR, 12P, FEMALE コネクタ　(メス)	
	VS1 – 6314 – 012		2	CONNECTOR, 12P, FEMALE コネクタ　(メス)	
	VS1 – 6319 – 024		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VT2 – 5161 – 024		2	HOLDER, CONNECTOR, 24P コネクタ　ホルダ	
J 425	VS1 – 0279 – 004		1	CONNECTOR, 4P, FEMALE コネクタ　(メス)	
	VS1 – 0280 – 004		1	CONNECTOR, 4P, MALE コネクタ　(オス)	
	WS3 – 0437 – 000		4	SOCKET CONTACT, 20-30AWG ソケット　コンタクト	
	WS3 – 5016 – 000		4	PIN CONTACT, 30-26AWG ピン　コンタクト	
J 426	NPN			THERMISTOR サーミスタ	TH1,2
	VS1 – 5057 – 005		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 – 6321 – 005		1	CONNECTOR, 5P, FEMALE コネクタ　(メス)	
J 427	VS1 – 5824 – 004		1	CONNECTOR, 4P, FEMALE コネクタ　(メス)	
	VS1 – 6321 – 004		1	CONNECTOR, 4P, FEMALE コネクタ　(メス)	
	VS1 – 5057 – 004		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	WS3 – 5358 – 000		4	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 428	VS1 – 6321 – 006		2	CONNECTOR, 6P, FEMALE コネクタ　(メス)	
	VS1 – 5057 – 006		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
J 429	VS1 – 5824 – 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	WS3 – 5358 – 000		3	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 430	VS1 – 0842 – 006		1	CONNECTOR, 6P, FEMALE コネクタ　(メス)	
	VS1 – 6321 – 006		1	CONNECTOR, 6P, FEMALE コネクタ　(メス)	
J 431	VS1 – 0842 – 006		1	CONNECTOR, 6P, FEMALE コネクタ　(メス)	
	VS1 – 6321 – 006		1	CONNECTOR, 6P, FEMALE コネクタ　(メス)	
J 432	VS1 – 0280 – 004		1	CONNECTOR, 4P, MALE コネクタ　(オス)	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B - J 432	VS3 − 0173 − 004		1	CONNECTOR, 4P, FEMALE コネクタ （メス）	
	WS3 − 0437 − 000		4	SOCKET CONTACT, 20-30AWG ソケット コンタクト	
	WS3 − 0885 − 000		4	PIN CONTACT, 20-30AWG ピン コンタクト	
J 433	FF3 − 1136 − 000		1	CABLE, TONER SENSOR トナー センサ中継束線	
	FF3 − 1303 − 000		1	CABLE, TONER SENSOR トナー センサ束線	
J 434	VS1 − 6321 − 007		2	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	VS1 − 5057 − 007		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
J 436	VS1 − 6321 − 006		2	CONNECTOR, 6P, FEMALE コネクタ （メス）	
	VS1 − 5057 − 006		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
J 437	VS1 − 6314 − 009		2	CONNECTOR, 9P, FEMALE コネクタ （メス）	
	VS1 − 6318 − 009		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
J 438	VS1 − 6320 − 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	VS1 − 6321 − 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	VS1 − 5057 − 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
J 439	VS3 − 0053 − 001		1	CONNECTOR, 1P, FEMALE コネクタ （メス）	
	VS4 − 0001 − 001		1	CONNECTOR, 1P, MALE コネクタ （オス）	
	WS4 − 0217 − 000		1	SOCKET CONTACT, 22-18AWG ソケット コンタクト	
	WS4 − 0219 − 000		1	PIN CONTACT, 18-22AWG ピン コンタクト	
J 441	VS1 − 6313 − 014		2	CONNECTOR, 14P, FEMALE コネクタ （メス）	
	VS1 − 6314 − 014		2	CONNECTOR, 14P, FEMALE コネクタ （メス）	
	VS1 − 6319 − 028		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	VT2 − 5161 − 028		2	HOLDER, CONNECTOR, 28P コネクタ ホルダ	
J 442	VS1 − 5730 − 002		1	CONNECTOR, 2P, FEMALE コネクタ （オス）	
	VS3 − 5083 − 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	WS3 − 5160 − 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
	WS3 − 5301 − 000		2	PIN CONTACT ピン コンタクト	
J 443	VS1 − 5730 − 002		1	CONNECTOR, 2P, FEMALE コネクタ （オス）	
	VS3 − 5083 − 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	WS3 − 5160 − 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
	WS3 − 5301 − 000		2	PIN CONTACT ピン コンタクト	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B - J 444	VS1 – 5729 – 002		1	CONNECTOR, 2P, MALE コネクタ （オス）	
	VS3 – 5083 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
	WS3 – 5301 – 000		2	PIN CONTACT ピン コンタクト	
J 445	VS1 – 6303 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	VS1 – 6304 – 002		1	CONNECTOR, 2P, MALE コネクタ （オス）	
	WS3 – 5570 – 000		2	SOCKET CONTACT, 22-28AWG ソケット コンタクト	
	WS3 – 5571 – 000		2	PIN CONTACT, 22-28AWG ピン コンタクト	
J 446	VS1 – 6303 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	VS1 – 6304 – 002		1	CONNECTOR, 2P, MALE コネクタ （オス）	
	WS3 – 5570 – 000		2	SOCKET CONTACT, 22-28AWG ソケット コンタクト	
	WS3 – 5571 – 000		2	PIN CONTACT, 22-28AWG ピン コンタクト	
J 447	VS1 – 5824 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	VS1 – 6321 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
	WS3 – 5358 – 000		1	SOCKET CONTACT, 22-26AWG ソケット コンタクト	
J 448	SYS			COPY DATA CONTROLLER コピー データ コントローラ	ACCESSORY
	VS1 – 6320 – 008		1	CONNECTOR, 8P, FEMALE コネクタ （メス）	
J 449	SYS			COPY DATA CONTROLLER コピー データ コントローラ	ACCESSORY
	VS1 – 6321 – 009		1	CONNECTOR, 9P, FEMALE コネクタ （メス）	
J 450	VS1 – 6321 – 003		2	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	VS1 – 5057 – 003		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
J 451	VS1 – 6321 – 013		2	CONNECTOR, 13P, FEMALE コネクタ （メス）	
	VS1 – 5057 – 013		1	CONNECTOR, SNAP TIGHT チュウケイ コネクタ	
J 454	VS1 – 6304 – 002		1	CONNECTOR, 2P, MALE コネクタ （オス）	
	VS1 – 6303 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	GP35F,31F iR400E,330E GP405 RNX,335 RNY
	WS3 – 5571 – 000		2	PIN CONTACT, 22-28AWG ピン コンタクト	
	WS3 – 5570 – 000		2	SOCKET CONTACT, 22-28AWG ソケット コンタクト	GP35F,31F iR400E,330E GP405 RNX,335 RNY

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B - J 457	VS1 - 6321 - 009		2	CONNECTOR, 9P, FEMALE コネクタ　(メス)	
	VS1 - 5057 - 009		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
J 458	NPN			POWER SUPPLY COOLING FAN 1 電源冷却ファン (1)	FM10
	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 - 6321 - 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
J 459	NPN			POWER SUPPLY COOLING FAN 2 電源冷却ファン (2)	FM11
	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	VS1 - 6321 - 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
J 461	VS1 - 5824 - 005		1	CONNECTOR, 5P, FEMALE コネクタ　(メス)	
	VS1 - 6321 - 005		1	CONNECTOR, 5P, FEMALE コネクタ　(メス)	
	VS1 - 5057 - 005		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	WS3 - 5358 - 000		4	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 462	VS1 - 0279 - 004		1	CONNECTOR, 4P, FEMALE コネクタ　(メス)	
	VS1 - 0280 - 004		1	CONNECTOR, 4P, MALE コネクタ　(オス)	
	WS3 - 0469 - 000		2	SOCKET CONTACT, 26-30AWG ソケット　コンタクト	
	WS3 - 5016 - 000		4	PIN CONTACT, 30-26AWG ピン　コンタクト	
J 470	VS1 - 6321 - 003		2	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
J 471	VS1 - 6321 - 003		2	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
J 472	VS1 - 5824 - 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
	VS1 - 6321 - 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
	VS1 - 5057 - 003		1	CONNECTOR, SNAP TIGHT チュウケイ　コネクタ	
	WS3 - 5358 - 000		3	SOCKET CONTACT, 22-26AWG ソケット　コンタクト	
J 490	VS1 - 6380 - 003		1	CONNECTOR, 3P, MALE コネクタ　(オス)	
	VS3 - 5121 - 003		1	CONNECTOR, 3P, FEMALE コネクタ　(メス)	
	WS3 - 5291 - 000		2	PIN CONTACT ピン　コンタクト	
	WS3 - 5292 - 000		2	SOCKET CONTACT ソケット　コンタクト	
J 491	VS1 - 6380 - 006		1	CONNECTOR, 6P, MALE コネクタ　(オス)	
	VS3 - 5121 - 006		1	CONNECTOR, 6P, FEMALE コネクタ　(メス)	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J 491	WS3 – 5291 – 000		6	PIN CONTACT ピン コンタクト	
	WS3 – 5292 – 000		6	SOCKET CONTACT ソケット コンタクト	
J 492	VS4 – 0001 – 002		1	CONNECTOR, 2P, MALE コネクタ （オス）	100V
	VS4 – 0002 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	100V
	WS4 – 0217 – 000		2	SOCKET CONTACT, 22-18AWG ソケット コンタクト	100V
	WS4 – 0219 – 000		2	PIN CONTACT, 18-22AWG ピン コンタクト	100V
J 493	VS4 – 0001 – 003		1	CONNECTOR, 3P, MALE コネクタ （オス）	
	VS4 – 0002 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	WS4 – 0217 – 000		2	SOCKET CONTACT, 22-18AWG ソケット コンタクト	
	WS4 – 0219 – 000		2	PIN CONTACT, 18-22AWG ピン コンタクト	
J 495	NPN			CASSETTE HEATER カセット ヒータ	ACCESSORY H3
	VS4 – 0002 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	WS4 – 0217 – 000		2	SOCKET CONTACT, 22-18AWG ソケット コンタクト	
J 496	VS3 – 5121 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	VS3 – 5122 – 003		1	CONNECTOR, 3P, MALE コネクタ （オス）	
	WS3 – 5291 – 000		3	PIN CONTACT ピン コンタクト	
	WS3 – 5292 – 000		3	SOCKET CONTACT ソケット コンタクト	
J 497	VS1 – 6380 – 003		1	CONNECTOR, 3P, MALE コネクタ （オス）	
	VS3 – 5121 – 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
	WS3 – 5291 – 000		3	PIN CONTACT ピン コンタクト	
	WS3 – 5292 – 000		3	SOCKET CONTACT ソケット コンタクト	
J 498	VS1 – 6380 – 002		1	CONNECTOR, 2P, MALE コネクタ （オス）	
	VS3 – 5121 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	WS3 – 5291 – 000		2	PIN CONTACT ピン コンタクト	
	WS3 – 5292 – 000		2	SOCKET CONTACT ソケット コンタクト	
J 499	VS4 – 0001 – 002		1	CONNECTOR, 2P, MALE コネクタ （オス）	100V
	VS4 – 0002 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	GP35F,31F
	WS4 – 0217 – 000		2	SOCKET CONTACT, 22-18AWG ソケット コンタクト	GP35F,31F
	WS4 – 0219 – 000		2	PIN CONTACT, 18-22AWG ピン コンタクト	100V
J 500	PCB			LASER DRIVER レーザ ドライバ	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J 500	VS1 – 6313 – 015		1	CONNECTOR, 15P, FEMALE コネクタ　（メス）	
	VS1 – 6314 – 015		1	CONNECTOR, 15P, FEMALE コネクタ　（メス）	
	VT2 – 5161 – 030		1	HOLDER, CONNECTOR, 30P コネクタ　ホルダ	
J 501	PCB			LASER DRIVER レーザ　ドライバ	
	VS3 – 5083 – 002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
	WS3 – 5160 – 000		2	SOCKET CONTACT, 18-24AWG ソケット　コンタクト	
J 502	NPN			CHOKE COIL チョーク　コイル	220/240V L1
	VS3 – 5092 – 002		1	CONNECTOR, 2P, MALE コネクタ（オス）	220/240V
	WS3 – 5224 – 000		2	PIN CONTACT ピン　コンタクト	220/240V
J 510	PCB			BEAM DETECTOR ビーム　ディテクタ	
	VS1 – 6314 – 004		1	CONNECTOR, 4P, FEMALE コネクタ　（メス）	
J 600	PCB			LOW VOLTAGE POWER SUPPLY 低圧電源	
	VS3 – 5083 – 008		1	CONNECTOR, 8P, FEMALE コネクタ　（メス）	
	WS3 – 5160 – 000		6	SOCKET CONTACT, 18-24AWG ソケット　コンタクト	
J 601	PCB			LOW VOLTAGE POWER SUPPLY 低圧電源	
	VS3 – 5083 – 009		1	CONNECTOR, 9P, FEMALE コネクタ　（メス）	
	WS3 – 5160 – 000		9	SOCKET CONTACT, 18-24AWG ソケット　コンタクト	
J 602	PCB			LOW VOLTAGE POWER SUPPLY 低圧電源	
	VS3 – 5083 – 002		1	CONNECTOR, 2P, FEMALE コネクタ　（メス）	
	WS3 – 5160 – 000		2	SOCKET CONTACT, 18-24AWG ソケット　コンタクト	
J 603	PCB			LOW VOLTAGE POWER SUPPLY 低圧電源	
	VS3 – 5083 – 004		1	CONNECTOR, 4P, FEMALE コネクタ　（メス）	
	WS3 – 5160 – 000		4	SOCKET CONTACT, 18-24AWG ソケット　コンタクト	
J 604	PCB			LOW VOLTAGE POWER SUPPLY 低圧電源	
	VS3 – 5083 – 007		1	CONNECTOR, 7P, FEMALE コネクタ　（メス）	
	WS3 – 5160 – 000		7	SOCKET CONTACT, 18-24AWG ソケット　コンタクト	
J 605	PCB			LOW VOLTAGE POWER SUPPLY 低圧電源	
	VS3 – 5083 – 006		1	CONNECTOR, 6P, FEMALE コネクタ　（メス）	
	WS3 – 5160 – 000		6	SOCKET CONTACT, 18-24AWG ソケット　コンタクト	
J 606	PCB			LOW VOLTAGE POWER SUPPLY 低圧電源	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B－ J 606	VS3－5083－007		1	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	WS3－5160－000		4	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 607	PCB			LOW VOLTAGE POWER SUPPLY 低圧電源	
	VS3－5083－005		1	CONNECTOR, 5P, FEMALE コネクタ （メス）	
	WS3－5160－000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 610	PCB			NOISE FILTER ノイズ フィルタ	
	VS1－6380－003		1	CONNECTOR, 3P, MALE コネクタ （オス）	
	WS3－5292－000		2	SOCKET CONTACT ソケット コンタクト	
J 611	PCB			NOISE FILTER ノイズ フィルタ	
	VS1－6380－006		1	CONNECTOR, 6P, MALE コネクタ （オス）	
	WS3－5292－000		4	SOCKET CONTACT ソケット コンタクト	
J 612	PCB			NOISE FILTER ノイズ フィルタ	
	VS1－6380－003		1	CONNECTOR, 3P, MALE コネクタ （オス）	
	WS3－5292－000		2	SOCKET CONTACT ソケット コンタクト	
J 613	PCB			NOISE FILTER ノイズ フィルタ	
	VS3－5083－002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	WS3－5160－000		1	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 701	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	VS3－5083－004		1	CONNECTOR, 4P, FEMALE コネクタ （メス）	
	WS3－5160－000		4	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 703	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	NPN			DOCUMENT SIZE SENSOR 3 原稿サイズ検知 (3)	SD3
J 704	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	NPN			DOCUMENT SIZE SENSOR 4 原稿サイズ検知 (4)	SD4
J 705	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	VS1－6314－002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
J 706	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	FH2－6474－000		1	CABLE, FFC FFC束線	GP405,355,335,315 iR400E,400S iR330E,330S
	FH2－6470－000		1	CABLE, FFC FFC束線	GP40,35F,35,31F,31

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J 707	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	VS1 - 6313 - 020		1	CONNECTOR, 20P, FEMALE コネクタ (メス)	
	VS1 - 6314 - 020		1	CONNECTOR, 20P, FEMALE コネクタ (メス)	
	VT2 - 5161 - 040		1	HOLDER, CONNECTOR, 40P コネクタ ホルダ	
J 708	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	VS1 - 6313 - 003		1	CONNECTOR, 3P, FEMALE コネクタ (メス)	
J 709	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	VS1 - 6314 - 005		1	CONNECTOR, 5P, FEMALE コネクタ (メス)	
J 710	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	VS1 - 6313 - 015		1	CONNECTOR, 15P, FEMALE コネクタ (メス)	
	VS1 - 6314 - 015		1	CONNECTOR, 15P, FEMALE コネクタ (メス)	
	VT2 - 5161 - 030		1	HOLDER, CONNECTOR, 30P コネクタ ホルダ	
J 711	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	NPN			DOCUMENT SIZE SENSOR 2 原稿サイズ検知 (2)	SD2
J 712	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	NPN			DOCUMENT SIZE SENSOR 1 原稿サイズ検知 (1)	SD1
J 713	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	VS1 - 6313 - 012		1	CONNECTOR, 12P, FEMALE コネクタ (メス)	
	VS1 - 6314 - 012		1	CONNECTOR, 12P, FEMALE コネクタ (メス)	
	VT2 - 5161 - 024		1	HOLDER, CONNECTOR, 24P コネクタ ホルダ	
J 714	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	VS1 - 6313 - 020		1	CONNECTOR, 20P, FEMALE コネクタ (メス)	
	VS1 - 6314 - 020		1	CONNECTOR, 20P, FEMALE コネクタ (メス)	
	VT2 - 5161 - 040		1	HOLDER, CONNECTOR, 40P コネクタ ホルダ	
J 715	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	PCB			SYSTEM MOTHER システム マザー	GP35F,31F iR400E,330E GP405 RNX,335 RNY
J 716	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	PCB			SYSTEM MOTHER システム マザー	GP35F,31F iR400E,330E GP405 RNX,355 RNY

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J 717	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	VS1-6313-016		1	CONNECTOR, 16P, FEMALE コネクタ (メス)	
	VS1-6314-016		1	CONNECTOR, 16P, FEMALE コネクタ (メス)	
	VT2-5161-032		1	HOLDER, CONNECTOR, 32P コネクタ ホルダ	
J 718	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	VS1-6314-006		1	CONNECTOR, 6P, FEMALE コネクタ (メス)	
J 761	PCB			POLYGON MOTOR DRIVER ポリゴン モータ ドライバ	
	VS3-5083-003		1	CONNECTOR, 3P, FEMALE コネクタ (メス)	
	WS3-5160-000		2	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 762	PCB			POLYGON MOTOR DRIVER ポリゴン モータ ドライバ	
	VS1-6321-004		1	CONNECTOR, 4P, FEMALE コネクタ (メス)	
J 763	PCB			POLYGON MOTOR DRIVER ポリゴン モータ ドライバ	
	VS1-6302-011		1	CONNECTOR, 11P, FEMALE コネクタ (メス)	
	WS3-5569-000		11	SOCKET CONTACT, 22-28AWG ソケット コンタクト	
J 764	NPN			POLYGON MOTOR ポリゴン モータ	M4
	VS3-0315-011		1	CONNECTOR, 11P, FEMALE コネクタ (メス)	
	WS3-1091-000		11	SOCKET CONTACT ソケット コンタクト	
J 901	PCB			CONTROL PANEL CPU 操作CPU	
	VS1-6313-015		1	CONNECTOR, 15P, FEMALE コネクタ (メス)	
	VS1-6314-015		1	CONNECTOR, 15P, FEMALE コネクタ (メス)	
	VT2-5161-030		1	HOLDER, CONNECTOR, 30P コネクタ ホルダ	
J 902	PCB			CONTROL PANEL CPU 操作CPU	
	VS1-0842-012		1	CONNECTOR, 12P, FEMALE コネクタ (メス)	
J 903	PCB			CONTROL PANEL CPU 操作CPU	
	VS1-0842-011		1	CONNECTOR, 11P, FEMALE コネクタ (メス)	
J 904	PCB			CONTROL PANEL CPU 操作CPU	
	VS1-0842-002		1	CONNECTOR, 2P, FEMALE コネクタ (メス)	
J 905	PCB			CONTROL PANEL CPU 操作CPU	
	VS1-0842-006		1	CONNECTOR, 6P, FEMALE コネクタ (メス)	
J 906	PCB			CONTROL PANEL CPU 操作CPU	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B－ J 906	PCB			FUNCTION KEY ファンクション キー	
J 907	PCB			CONTROL PANEL CPU 操作CPU	
	PCB			TOUCH PANEL タッチ パネル	TP1
J 908	PCB			CONTROL PANEL CPU 操作CPU	
	NPN			LCD LCD	LCD1
J 910	PCB			CONTROL PANEL CPU 操作CPU	
	VS1 － 0842 － 003		1	CONNECTOR, 3P, FEMALE コネクタ （メス）	
J 921	PCB			CONTROL PANEL KEY 操作キー	
	VS1 － 0978 － 012		1	CONNECTOR, 12P, FEMALE コネクタ （メス）	
J 922	PCB			CONTROL PANEL KEY 操作キー	
	VS1 － 0978 － 011		1	CONNECTOR, 11P, MALE コネクタ （オス）	
J 931	PCB			CONTROL PANEL KEY 操作キー	
	VS1 － 0978 － 002		1	CONNECTOR, 2P, MALE コネクタ （オス）	
J 941	PCB			CONTROL PANEL KEY 操作キー	
	VS1 － 0842 － 004		1	CONNECTOR, 4P, FEMALE コネクタ （メス）	
J 955	PCB			INVERTER インバータ	INV1
	VS1 － 0842 － 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
J 956	PCB			INVERTER インバータ	INV1
	NPN			LCD LCD	LCD1
J 961	PCB			CONTROL PANEL KEY 操作キー	
	VS1 － 0978 － 003		1	CONNECTOR, 3P, MALE コネクタ （オス）	
J1201	VS3 － 5083 － 007		1	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	VS1 － 5730 － 007		1	CONNECTOR, 7P, MALE コネクタ （オス）	GP35F,31F iR400E,330E GP405 RNX,335 RNY
	WS3 － 5160 － 000		7	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
	WS3 － 5301 － 000		7	PIN CONTACT ピン コンタクト	GP35F,31F iR400E,330E GP405 RNX,335 RNY
J1601	PCB			PAPER PICK-UP 給紙	
	VS1 － 6314 － 018		1	CONNECTOR, 18P, FEMALE コネクタ （メス）	
J1602	PCB			PAPER PICK-UP 給紙	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B- J1602	NPN			PAPER PICK-UP MOTOR 給紙モータ	M5
J1603	PCB			PAPER PICK-UP 給紙	
	NPN			VERTICAL PATH CLUTCH 縦パス クラッチ	CL3
J1604	PCB			PAPER PICK-UP 給紙	
	NPN			PAPER PICK-UP ROLLER SOLENOID 給紙ローラ ソレノイド	SL1
J1607	PCB			PAPER PICK-UP 給紙	
	VS1－6314－003		1	CONNECTOR, 3P, FEMALE コネクタ (メス)	
J1608	PCB			PAPER PICK-UP 給紙	
	VS1－6321－003		1	CONNECTOR, 3P, FEMALE コネクタ (メス)	
J8001	PCB			SYSTEM MOTHER システム マザー	GP35F,31F iR400E,330E
					GP405 RNX,335 RNY
	VS3－5083－007		1	CONNECTOR, 7P, FEMALE コネクタ (メス)	GP35F,31F iR400E,330E GP405 RNX,335 RNY
	WS3－5160－000		7	SOCKET CONTACT, 18-24AWG ソケット コンタクト	GP35F,31F iR400E,330E GP405 RNX,335 RNY
J8002	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	PCB			SYSTEM MOTHER システム マザー	GP35F,31F iR400E,330E GP405 RNX,335 RNY
J8003	SYS			PDL INTERFACE PDLインターフェース	ACCESSORY
	PCB			SYSTEM MOTHER システム マザー	GP35F,31F iR400E,330E
					GP405 RNX,335 RNY
J8004	PCB			SYSTEM MOTHER システム マザー	GP35F,31F iR400E,330E GP405 RNX,335 RNY
	PCB			FAX BOARD FAXボード	GP35F,31F iR400E,330E
J8005	PCB			IMAGE PROCESSOR イメージ プロセッサ	
	PCB			SYSTEM MOTHER システム マザー	GP35F,31F iR400E,330E GP405 RNX,335 RNY
J8006	SYS			SCSI INTERFACE BOARD-E1 SCSIインターフェース ボード・E1	ACCESSORY
	PCB			SYSTEM MOTHER システム マザー	GP35F,31F iR400E,330E GP405 RNX,335 RNY

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
B－ J8201	SYS			PRINTER MOTHER プリンタ マザー	ACCESSORY
	VS3－5083－006		1	CONNECTOR, 6P, FEMALE コネクタ （メス）	
	WS3－5160－000		6	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J8301	PCB			SYSTEM MOTHER システム マザー	GP35F,31F iR400E,330E GP405 RNX,335 RNY
	PCB			FAX BOARD FAXボード	GP35F,31F iR400E,330E
J8302	PCB			FAX BOARD FAXボード	GP35F,31F iR400E,330E
	FH2－6341－000		1	CABLE, FCC FFC束線	GP35F,31F iR400E,330E
J8303	PCB			FAX BOARD FAXボード	GP35F,31F iR400E,330E
	NPN			SPEAKER スピーカ	GP35F,31F iR400E,330E
J8304	SYS			MULTI PORT KIT-A1 マルチ ポート キット・A1	ACCESSORY
	PCB			FAX BOARD FAXボード	GP35F,31F iR400E,330E
J8321	PCB			MODULAR JACK モジュラ ジャック	GP35F,31F iR400E,330E
	VS3－5080－008		1	CONNECTOR, 8P, MALE コネクタ （オス）	GP35F,31F iR400E,330E
	WT1－5155－000		4	TERMINAL ターミナル	iR400E,330E
	WT1－5155－000		6	TERMINAL ターミナル	GP35F,31F
J8322	PCB			MODULAR JACK モジュラ ジャック	GP35F,31F iR400E,330E
	VS3－5080－002		1	CONNECTOR, 2P, MALE コネクタ （オス）	GP35F,31F iR400E,330E GP405 RNX,335 RNY
J9001	PCB			DOWN LOAD ダウン ロード	
	VS1－6313－020		1	CONNECTOR, 20P, FEMALE コネクタ （メス）	
	VS1－6314－020		1	CONNECTOR, 20P, FEMALE コネクタ （メス）	
	VT2－5161－040		1	HOLDER, CONNECTOR, 40P コネクタ ホルダ	

Multi PDL Printer Board - H1

for GP405/335
for imageRUNNER 400E/400S/330E/330S
[120/220/240V F61-7106]

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FA.　主要部品配置図

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F90.　PS／PCLプリンタ　ボード回路基板
F95.　PDLインターフェース回路基板

FB.　コネクター覧

D2.　部品索引表

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F10. PS/PCL PRINTER BOARD KIT

F90. PS/PCL PRINTER BOARD PCB ASSEMBLY
F95. PDL INTERFACE PCB ASSEMBLY

FB. LIST OF CONNECTORS

D2. NUMERICAL INDEX

FIGURE FA ASSEMBLY LOCATION DIAGRAM
主要部品配置図

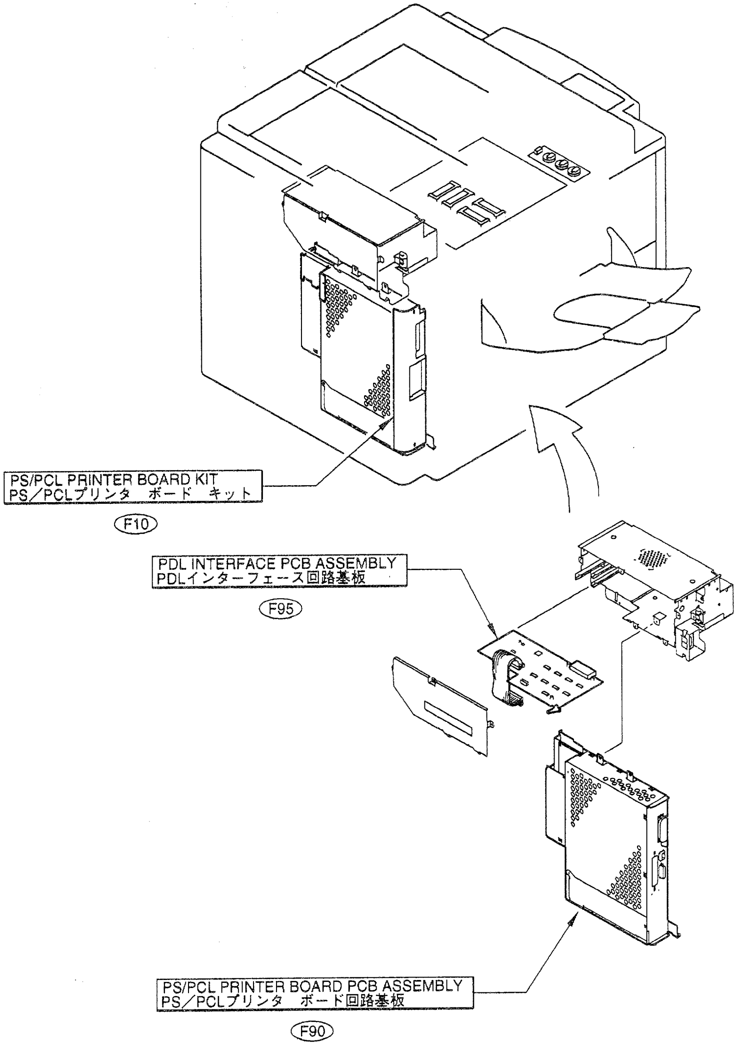
PS/PCL PRINTER BOARD KIT
PS／PCLプリンタ　ボード　キット
F10
PDL INTERFACE PCB ASSEMBLY
PDLインターフェース回路基板
F95
PS/PCL PRINTER BOARD PCB ASSEMBLY
PS／PCLプリンタ　ボード回路基板
F90

FIGURE F10 PS/PCL PRINTER BOARD KIT
PS／PCLプリンタ ボード キット

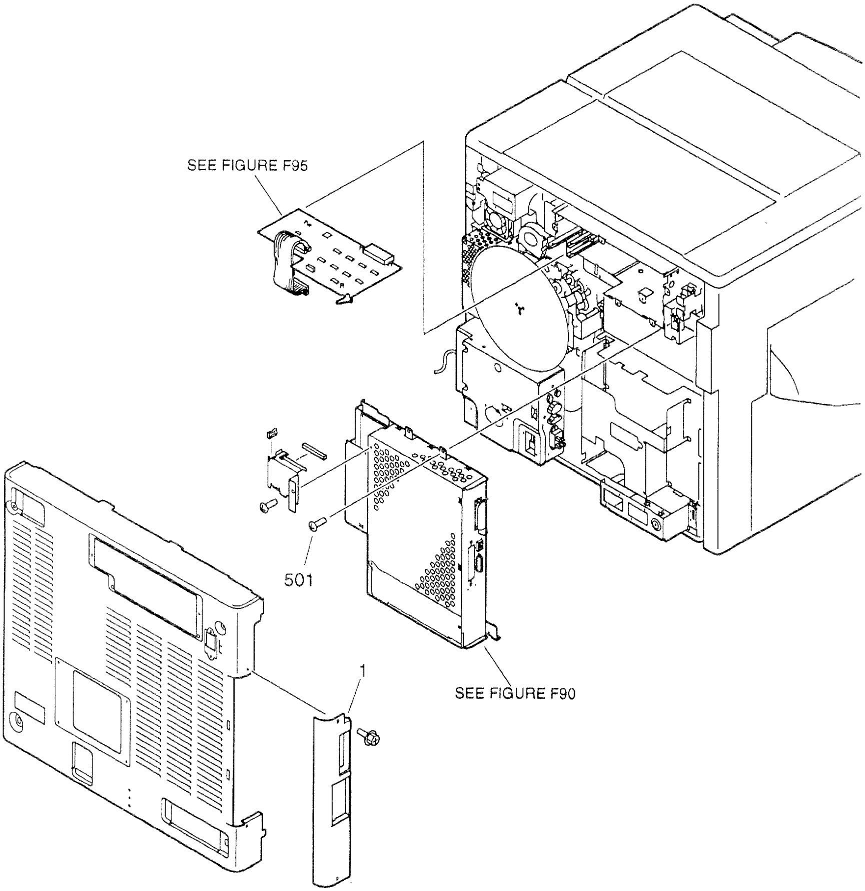
SEE FIGURE F95
501
1
SEE FIGURE F90

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
F10 -	NPN		RF	PS/PCL PRINTER BOARD KIT PS／PCLプリンタ ボード キット	
1	FB4 － 3334 － 000		1	COVER, PCB BLANKING 基板目隠しカバー	
501	XB1 － 2400 － 606		5	SCREW,MACH.,TRUSS HEAD,M4X6 バインド ネジ	

FIGURE F90 PS/PCL PRINTER BOARD PCB ASSEMBLY
PS／PCLプリンタ　ボード回路基板

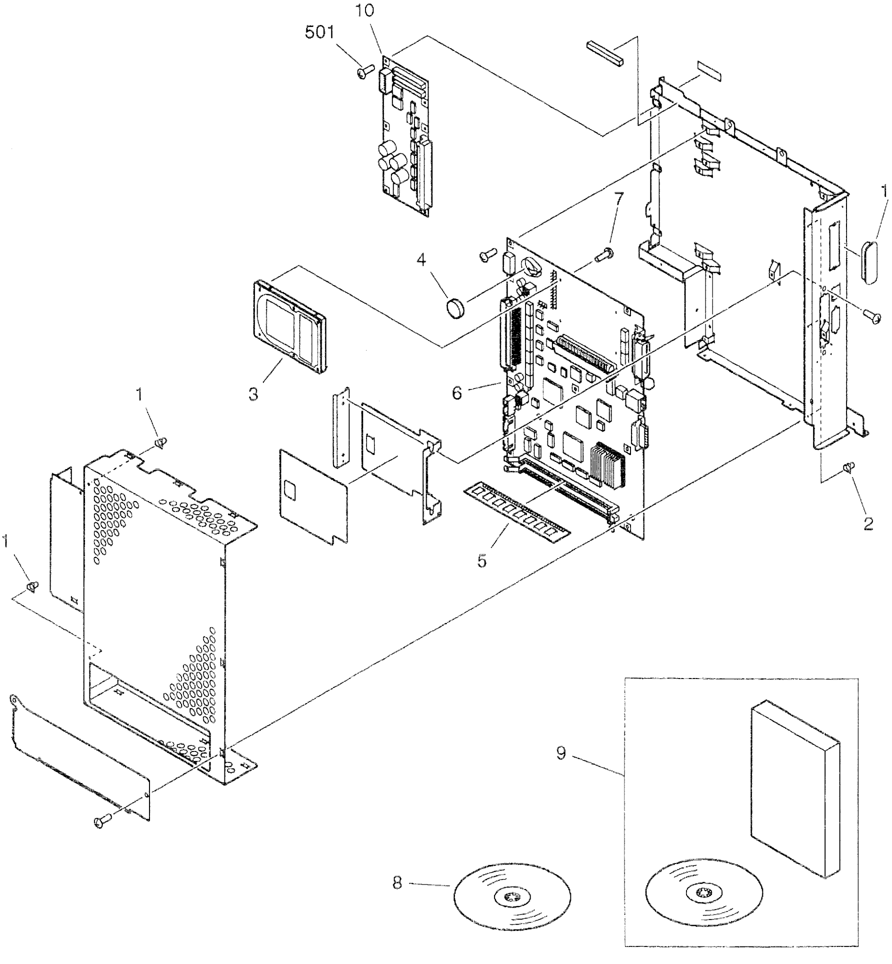
10
501
7
11
4
3
6
1
1
2
5
9
8

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
F90 -	PCB		RF	PS/PCL PRINTER BOARD PCB ASS'Y PS／PCLプリンタ ボード回路基板	
1	FB3 − 2351 − 000		3	CAP, DUST-PROOF ダスト キャップ	
2	FB3 − 2351 − 000		4	CAP, DUST-PROOF ダスト キャップ	
3	FE1 − 5020 − 000		1	HARD DISK DRIVE UNIT ハード ディスク ドライブ ユニット	
4	FE1 − 5021 − 000		1	BATTERY,LITHIUM COIN バッテリ	
5	FE1 − 5022 − 000		1	DIMM ASS'Y, UG54S6608GSG DIMM	
6	FE1 − 5023 − 000		1	PRINTER PS BOARD PCB ASSEMBLY プリンタPSボード回路基板	
7	FE1 − 5036 − 000		4	SCREW ネジ	
8	FE1 − 5044 − 000		1	CD-ROM,SYSTEM SOFTWARE,VER.1.0 システム ソフトウェア CD−ROM（VER. 1. 0）	
9	FE1 − 5046 − 000		1	MEDIA PACK, VER.1.0 メディア パック（VER. 1. 0）	ENGLISH
	FE1 − 5047 − 000		1	MEDIA PACK, VER.1.0 メディア パック（VER. 1. 0）	FRENCH
	FE1 − 5048 − 000		1	MEDIA PACK, VER.1.0 メディア パック（VER. 1. 0）	GERMAN
	FE1 − 5049 − 000		1	MEDIA PACK, VER.1.0 メディア パック（VER. 1. 0）	ITALIAN
	FE1 − 5050 − 000		1	MEDIA PACK, VER.1.0 メディア パック（VER. 1. 0）	SPANISH
10	FG2 − 9717 − 000		1	PRINTER MOTHER PCB ASSEMBLY プリンタ マザー回路基板	
11	WS9 − 0104 − 000		1	CAP, DUST ダスト キャップ	
501	XB6 − 7300 − 407		29	SCREW,TP,M3X4 TP ネジ	

FIGURE F95 PDL INTERFACE PCB ASSEMBLY
PDLインターフェース回路基板

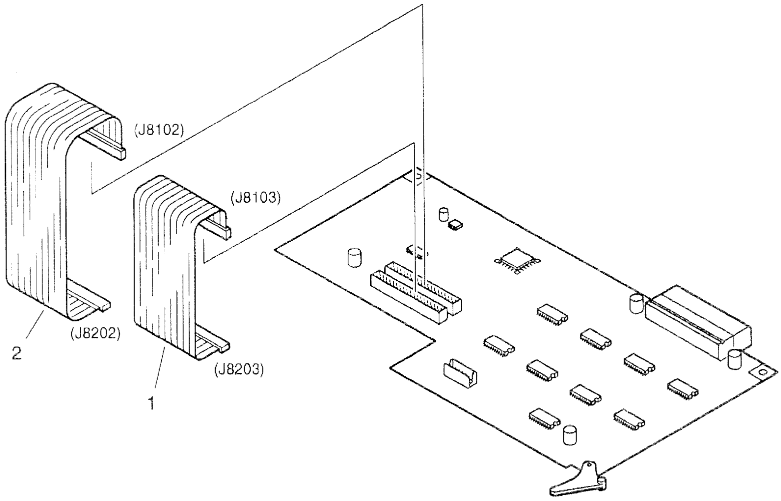

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
F95 –	FG3 – 0138 – 000		1	PDL INTERFACE PCB ASSEMBLY PDLインターフェース回路基板	
1	FH2 – 6472 – 000		1	CABLE, FLAT, 1 フラット ケーブル (1)	J8103,8203
2	FH2 – 6473 – 000		1	CABLE, FLAT, 2 フラット ケーブル (2)	J8102,8202
FU8101	VD7 – 0622 – 001		1	FUSE, 125V, 2A ヒューズ	
FU8102	VD7 – 0621 – 001		1	FUSE, 125V, 1A ヒューズ	
IC 775	FH4 – 6005 – 000		1	IC, XC9536-10VQ44C4,GATE ARRAY ゲート アレイ	
IC8231	FH9 – 0634 – 000		1	IC, W42C31-09(G DOT), DRIVER ドライバ IC	

FIGURE FB LIST OF CONNECTORS コネクタ一覧

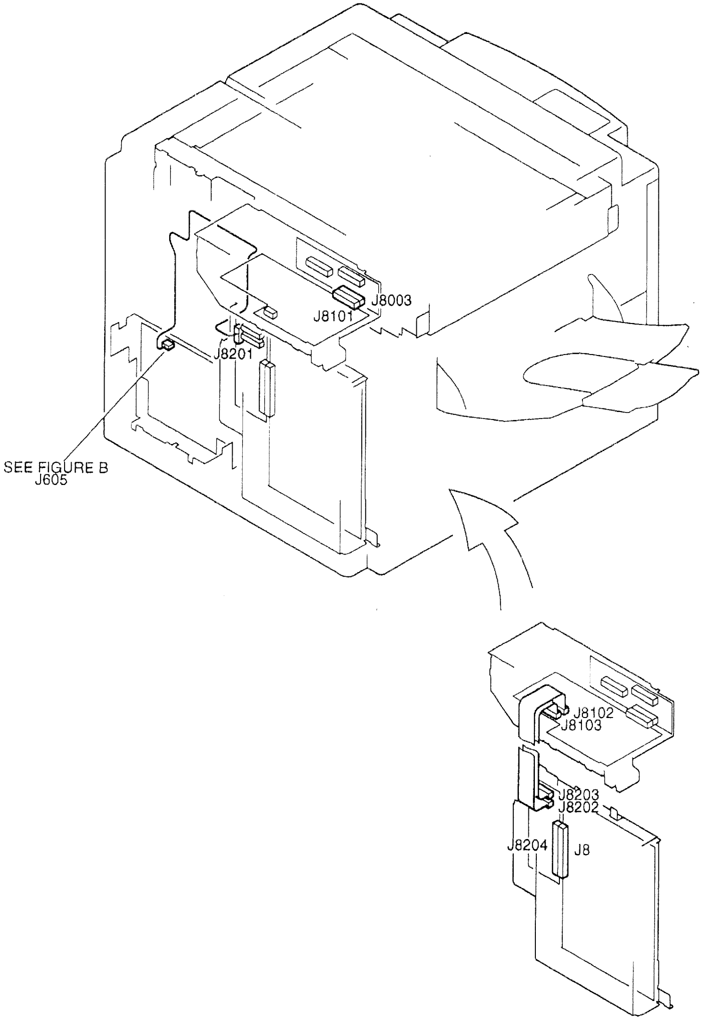
J8003
J8101
J8201
SEE FIGURE B
J605
J8102
J8103
J8203
J8202
J8204
J8

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
FB -	NPN		RF	LIST OF CONNECTORS コネクタ一覧	
J 8	PCB			PS/PCL PRINTER BOARD PS/PCLプリンタ ボード	
	PCB			PRINTER MOTHER プリンタ マザー	
J8003	SYS			SYSTEM MOTHER システム マザー	ACCESSORY
	PCB			PDL INTERFACE PDLインターフェース	
J8101	SYS			SYSTEM MOTHER システム マザー	ACCESSORY
	PCB			PDL INTERFACE PDLインターフェース	
J8102	PCB			PDL INTERFACE PDLインターフェース	
	FH2 − 6473 − 000		1	CABLE, FLAT, 2 フラット ケーブル (2)	
J8103	PCB			PDL INTERFACE PDLインターフェース	
	FH2 − 6472 − 000		1	CABLE, FLAT, 1 フラット ケーブル (1)	
J8201	SYS			COPIA 複写機 本体	
	PCB			PRINTER MOTHER プリンタ マザー	
J8202	PCB			PRINTER MOTHER プリンタ マザー	
	FH2 − 6473 − 000		1	CABLE, FLAT, 2 フラット ケーブル (2)	
J8203	PCB			PRINTER MOTHER プリンタ マザー	
	FH2 − 6472 − 000		1	CABLE, FLAT, 1 フラット ケーブル (1)	
J8204	PCB			PS/PCL PRINTER BOARD PS/PCLプリンタ ボード	
	PCB			PRINTER MOTHER プリンタ マザー	

Battery Board - A1

バッテリーボード・A1

for GP405/355/335/315
for imageRUNNER 400S/330S
〔 F61-7110 〕

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FA.　主要部品配置図

F97.　バッテリ　ボード回路基板

D3.　部品索引表

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FA. ASSEMBLY LOCATION DIAGRAM

F97. BATTERY BOARD PCB ASSEMBLY

D3. NUMERICAL INDEX

FIGURE FA ASSEMBLY LOCATION DIAGRAM 主要部品配置図

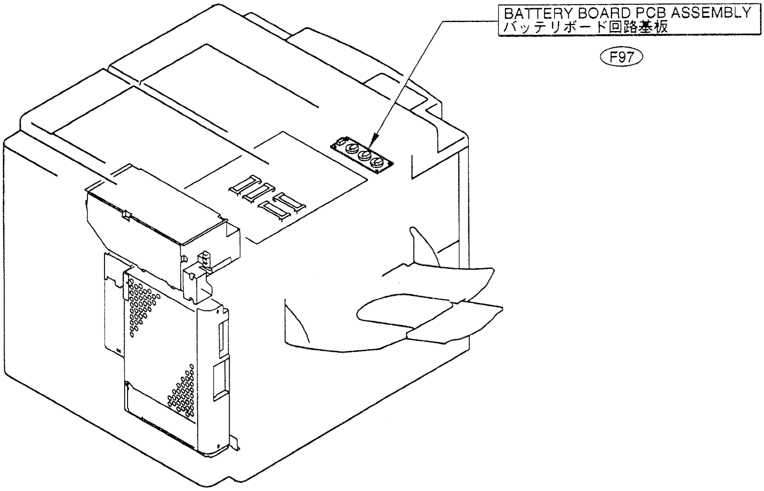
BATTERY BOARD PCB ASSEMBLY
バッテリボード回路基板
F97

FIGURE F97 BATTERY BOARD PCB ASSEMBLY バッテリ　ボード回路基板

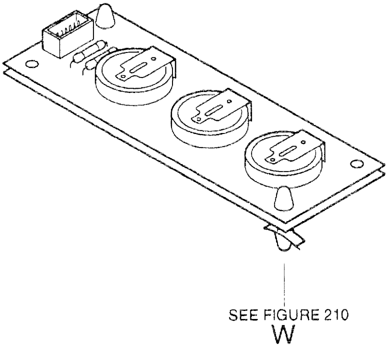

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
F97 -	FG6 — 3888 — 000		1	BATTERY BOARD PCB ASSEMBLY バッテリ　ボード回路基板	

Super G3 FAX Unit - E1

スーパーG3ファクスユニット・E1

for GP40/35/31
[100V 50/60Hz F61-7111]

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GA.　主要部品配置図

G10.　FAXキット

G90.　FAXボード回路基板

GB.　コネクター一覧

D4.　部品索引表

CONTENTS

GA. ASSEMBLY LOCATION DIAGRAM

G10. FAX KIT

G90. FAX BOARD PCB ASSEMBLY

GB. LIST OF CONNECTORS

D4. NUMERICAL INDEX

FIGURE GA ASSEMBLY LOCATION DIAGRAM 主要部品配置図

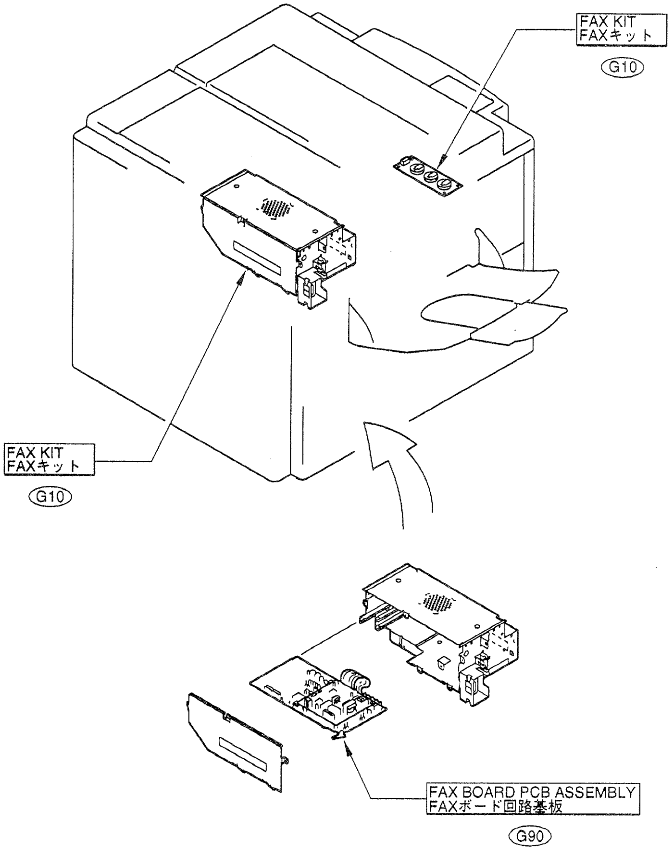
FAX KIT
FAXキット
G10
FAX KIT
FAXキット
G10
FAX BOARD PCB ASSEMBLY
FAXボード回路基板
G90

FIGURE G10 FAX KIT FAXキット

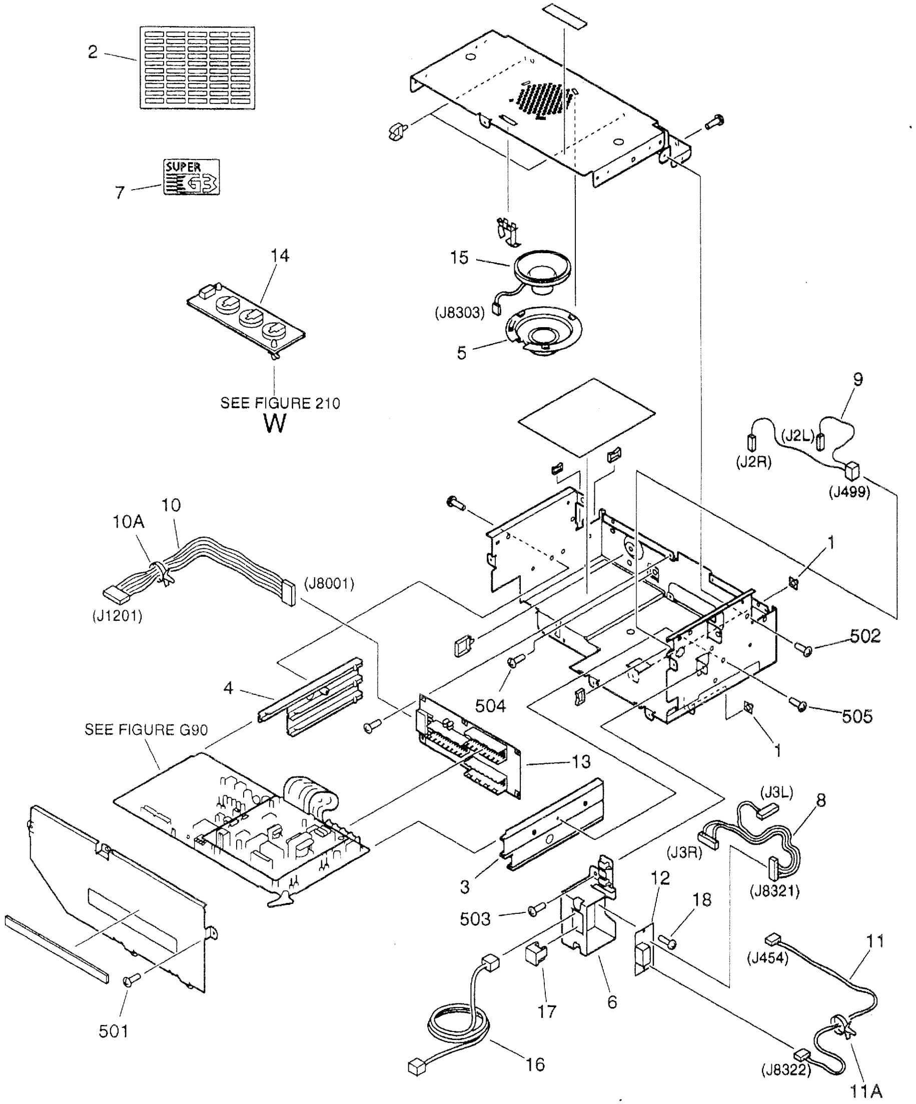
2
7
SUPER G3
14
SEE FIGURE 210
W
15
(J8303)
5
9
(J2L)
(J2R)
(J499)
10A
10
(J8001)
(J1201)
1
502
4
504
505
SEE FIGURE G90
13
1
(J3L)
8
(J3R)
(J8321)
3
12
18
503
11
(J454)
17
6
501
16
(J8322)
11A

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
G10 -	NPN		RF	FAX KIT FAXキット	
1	FA9 − 1800 − 000		2	CUP カップ	
2	FB3 − 2553 − 000		2	LABEL, ONE-TOUCH KEY ワンタッチ キー ラベル	
3	FB4 − 3014 − 000		1	RAIL, 1 レール (1)	
4	FB4 − 3015 − 000		1	RAIL, 2 レール (2)	
5	FB4 − 3033 − 000		1	HOLDER, SPEAKER スピーカ ホルダ	
6	FB4 − 3035 − 000		1	HOLDER, MODULAR JACK モジュラ ジャック ホルダ	
7	FB4 − 6724 − 000		1	LABEL, "SUPER G3" スーパーG3ラベル	
8	FF3 − 2889 − 000		1	CABLE, MODULAR モジュラ束線	J3R,3L,8321
9	FF3 − 2891 − 000		1	CABLE, ARESTA GROUNDING アレスタ アース中継束線	J2R,2L,499
10	FF3 − 3000 − 000		1	CABLE, S. MOTHER POWER SUPPLY システム マザー電源束線	J1201,8001
10A	WT2 − 5565 − 000		1	CLAMP, CABLE ソクセン オサエ	
11	FF3 − 3008 − 000		1	CABLE, HAND SET CONNECTING ハンド セット中継束線	J454,8322
11A	WT2 − 5565 − 000		1	CLAMP, CABLE ソクセン オサエ	
12	FG2 − 9517 − 000		1	MODULAR JACK PCB UNIT モジュラ ジャック回路基板	
13	FG2 − 9526 − 000		1	SYSTEM MOTHER PCB ASSEMBLY システム マザー回路基板	
14	FG6 − 3888 − 000		1	BATTERY BOARD PCB ASSEMBLY バッテリ ボード回路基板	
15	FH6 − 3857 − 000		1	SPEAKER スピーカ	J8303
16	HH2 − 2484 − 000		1	CABLE, MODULAR モジュラ束線	
17	WS9 − 5038 − 000		1	SPACER, MODULAR モジュラ スペーサ	
18	XA9 − 0591 − 000		2	SCREW,M3X8 タイト ネジ	
501	XB1 − 2300 − 606		5	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
502	XB1 − 2300 − 606		14	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
503	XB1 − 2300 − 606		1	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
504	XB2 − 7400 − 607		3	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	
505	XB4 − 7300 − 806		2	SCREW,TAPPING,TRUSS HEAD,M3X8 バインド タッピン ネジ	

FIGURE G90 FAX BOARD PCB ASSEMBLY FAXボード回路基板

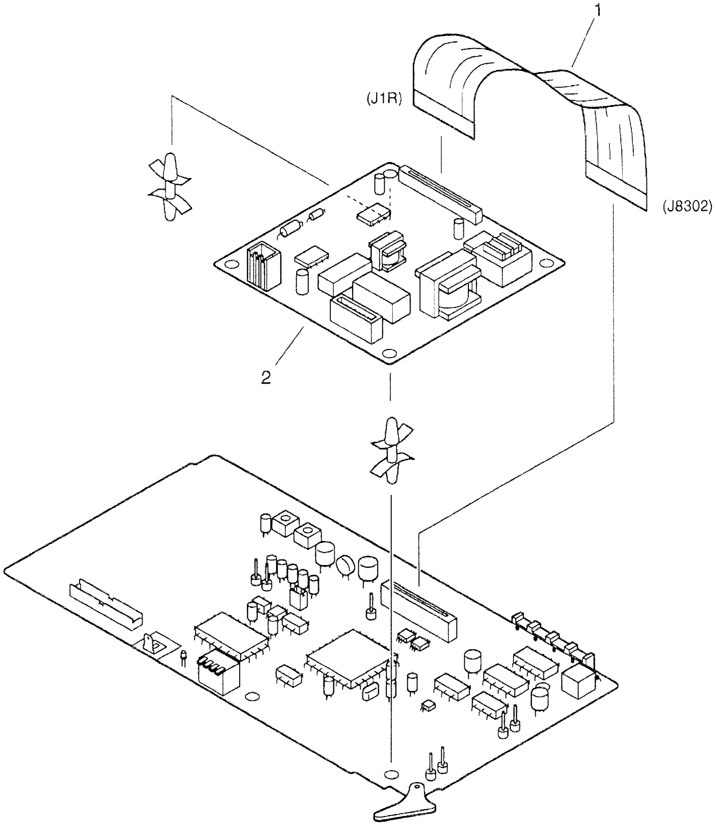

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
G90 -	FG2 — 9698 — 000		1	FAX BOARD PCB ASSEMBLY FAXボード回路基板	
1	FH2 — 6341 — 000		1	CABLE, FCC FFC束線	J1R,8302
2	HG5 — 1039 — 000		1	NCU BOARD PCB ASSEMBLY NCUボード回路基板	
CP1	FH9 — 0186 — 000		1	PIN, CHECK チェック ピン	
CP2	FH9 — 0186 — 000		1	PIN, CHECK チェック ピン	
FU1	VD7 — 0623 — 000		1	FUSE, 125A, 3A ヒューズ	
IC7	FH4 — 5982 — 000		1	IC, UPD65625GF-100, GATE ARRAY ゲート アレイ	
LED1	WG1 — 0373 — 000		1	LED, SEL2110R LED	

FIGURE GB LIST OF CONNECTORS コネクター覧

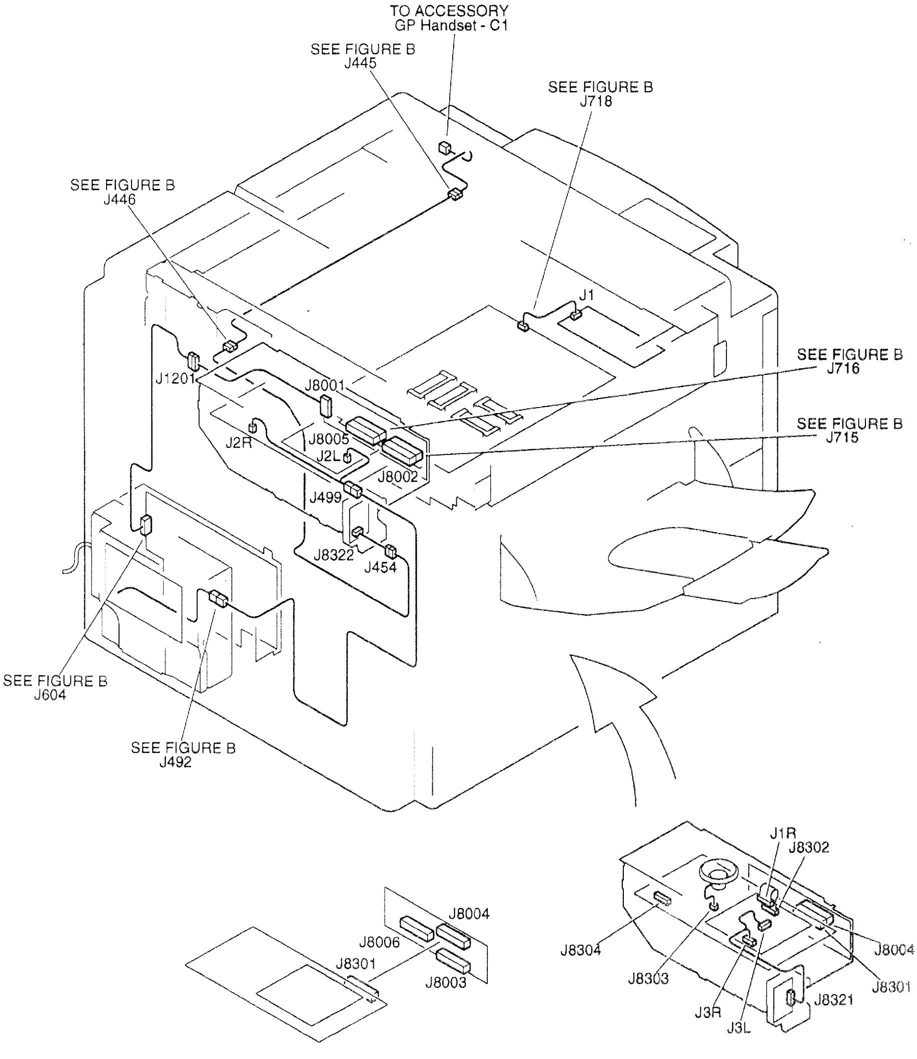
TO ACCESSORY
GP Handset - C1
SEE FIGURE B
J445
SEE FIGURE B
J718
SEE FIGURE B
J446
J1
SEE FIGURE B
J716
J1201
J8001
SEE FIGURE B
J715
J8005
J2R
J2L
J8002
J499
J8322
J454
SEE FIGURE B
J604
SEE FIGURE B
J492
J1R
J8302
J8004
J8006
J8301
J8003
J8304
J8004
J8303
J8301
J8321
J3R
J3L

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
GB -	NPN		RF	LIST OF CONNECTORS コネクタ一覧	
J 1	SYS			TO COPIA 複写機 本体	
	PCB			BATTERY BOARD バッテリ ボード	
J 1R	PCB			NCU BOARD NCUボード	
	FH2 − 6341 − 000		1	CABLE, FCC FFC束線	
J 2L	PCB			NCU BOARD NCUボード	
	WT1 − 5252 − 000		1	SLEEVE, FASTON ワンタッチ スリーブ	
J 2R	PCB			FAX BOARD FAXボード	
	WT1 − 5252 − 000		1	SLEEVE, FASTON ワンタッチ スリーブ	
J 3L	PCB			NCU BOARD NCUボード	
	VS3 − 5080 − 005		1	CONNECTOR, 5P, MALE コネクタ (オス)	
	WT1 − 5155 − 000		2	TERMINAL ターミナル	
J 3R	PCB			NCU BOARD NCUボード	
	VS3 − 5080 − 005		1	CONNECTOR, 5P, MALE コネクタ (オス)	
	WT1 − 5155 − 000		4	TERMINAL ターミナル	
J 454	SYS			TO COPIA 複写機 本体	
	VS1 − 6303 − 002		1	CONNECTOR, 2P, FEMALE コネクタ (メス)	
	WS3 − 5570 − 000		2	SOCKET CONTACT, 22-28AWG ソケット コンタクト	
J 499	SYS			TO COPIA 複写機 本体	
	VS4 − 0002 − 002		1	CONNECTOR, 2P, FEMALE コネクタ (メス)	
	WS4 − 0217 − 000		2	SOCKET CONTACT, 22-18AWG ソケット コンタクト	
J 715	SYS			TO COPIA 複写機 本体	
	PCB			SYSTEM MOTHER システム マザー	
J 716	SYS			TO COPIA 複写機 本体	
	PCB			SYSTEM MOTHER システム マザー	
J1201	SYS			TO COPIA 複写機 本体	
	VS1 − 5730 − 007		1	CONNECTOR, 7P, MALE コネクタ (オス)	
	WS3 − 5301 − 000		7	PIN CONTACT ピン コンタクト	
J8001	PCB			SYSTEM MOTHER システム マザー	
	VS3 − 5083 − 007		1	CONNECTOR, 7P, FEMALE コネクタ (メス)	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
GB－J8001	WS3－5160－000		7	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J8002	SYS			TO COPIA 複写機 本体	
	PCB			SYSTEM MOTHER システム マザー	
J8003	SYS			PDL INTERFACE PDLインターフェース	ACCESSORY
	PCB			SYSTEM MOTHER システム マザー	
J8004	PCB			FAX BOARD FAXボード	
	PCB			SYSTEM MOTHER システム マザー	
J8005	SYS			TO COPIA 複写機 本体	
	PCB			SYSTEM MOTHER システム マザー	
J8006	SYS			SCSI INTERFACE BOARD SCSIインターフェース ボード	ACCESSORY
	PCB			SYSTEM MOTHER システム マザー	
J8301	PCB			FAX BOARD FAXボード	
	PCB			SYSTEM MOTHER システム マザー	
J8302	PCB			FAX BOARD FAXボード	
	FH2－6341－000		1	CABLE, FCC FFC束線	
J8303	PCB			FAX BOARD FAXボード	
	NPN			SPEAKER スピーカ	
J8304	SYS			MULTI PORT マルチ ポート	ACCESSORY
	PCB			FAX BOARD FAXボード	
J8321	PCB			MODULAR JACK モジュラ ジャック	
	VS3－5080－008		1	CONNECTOR, 8P, MALE コネクタ （オス）	
	WT1－5155－000		6	TERMINAL ターミナル	
J8322	PCB			MODULAR JACK モジュラ ジャック	
	VS3－5080－002		1	CONNECTOR, 2P, MALE コネクタ （オス）	
	WT1－5155－000		2	TERMINAL ターミナル	

Expansion Board Base Unit - C1

基本拡張キット・C1

for GP405/355/335/315
for imageRUNNER 400S/330S
〔 F61-7100 〕

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GA.　主要部品配置図

G11.　拡張ボード部

GB.　コネクター覧

D5.　部品索引表

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GA. ASSEMBLY LOCATION DIAGRAM

G11. EXPANSION BOARD ASSEMBLY

GB. LIST OF CONNECTORS

D5. NUMERICAL INDEX

FIGURE GA ASSEMBLY LOCATION DIAGRAM
主要部品配置図

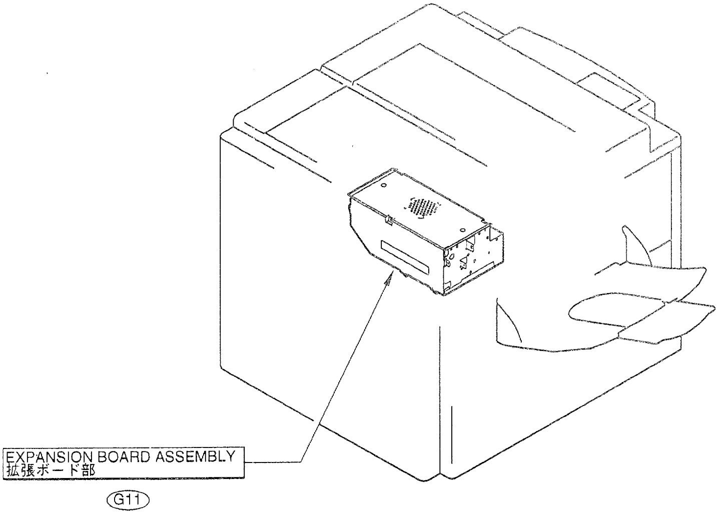
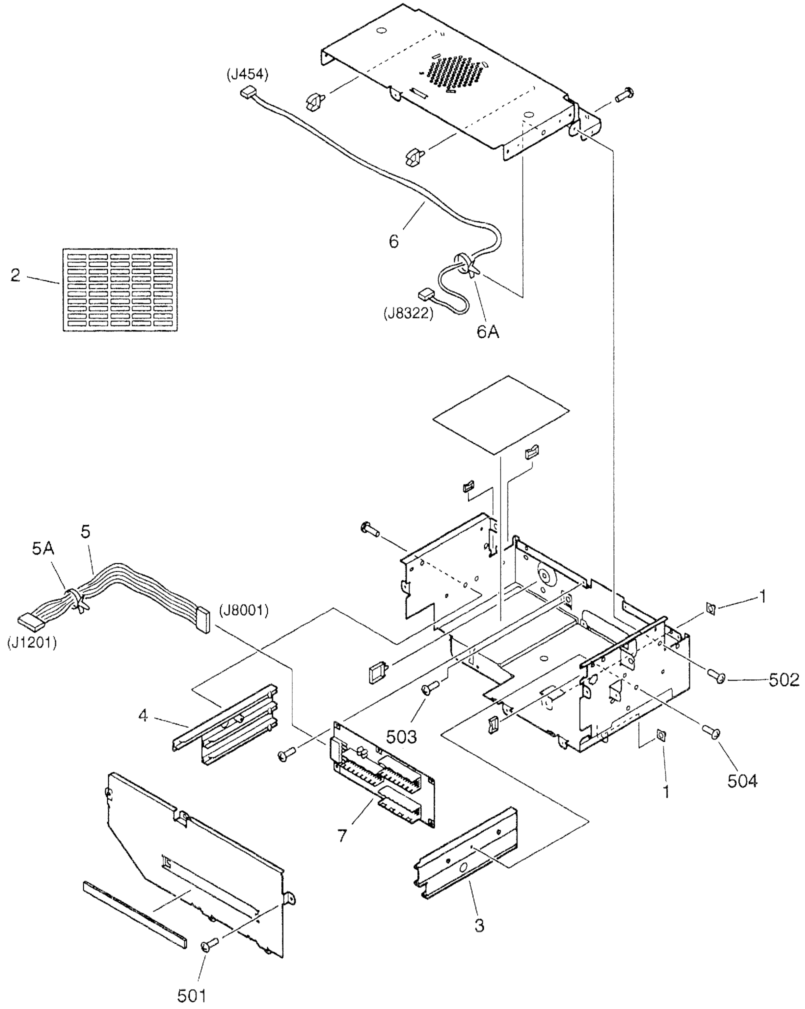

EXPANSION BOARD ASSEMBLY
拡張ボード部
G11

FIGURE G11 EXPANSION BOARD ASSEMBLY
拡張ボード部


(J454)
6
2
(J8322)
6A
5
5A
(J8001)
(J1201)
1
502
4
503
504
1
7
3
501

NOTE:This assembly does not include the parts shown with key No.501 and 503.
注：このユニットにKey No. 501、503の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
G11 -	FG6 – 0505 – 000		1	EXPANSION BOARD ASSEMBLY 拡張ボード部	
1	FA9 – 1800 – 000		2	CUP カップ	
2	FB3 – 2553 – 000		2	LABEL, ONE-TOUCH KEY ワンタッチ キー ラベル	
3	FB4 – 3014 – 000		1	RAIL, 1 レール (1)	
4	FB4 – 3015 – 000		1	RAIL, 2 レール (2)	
5	FF3 – 3000 – 000		1	CABLE, S. MOTHER POWER SUPPLY システム マザー電源束線	J1201,8001
5 A	WT2 – 5565 – 000		1	CLAMP, CABLE ソクセン オサエ	
6	FF3 – 3008 – 000		1	CABLE, HAND SET CONNECTING ハンド セット中継束線	J454,8322
6 A	WT2 – 5565 – 000		1	CLAMP, CABLE ソクセン オサエ	
7	FG2 – 9526 – 000		1	SYSTEM MOTHER PCB ASSEMBLY システム マザー回路基板	
501	XB1 – 2300 – 606		5	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	SEE NOTE
502	XB1 – 2300 – 606		12	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	
503	XB2 – 7400 – 607		3	SCREW,W/WASHER,M4X6 バネツキ バインド ネジ	SEE NOTE
504	XB4 – 7300 – 806		2	SCREW,TAPPING,TRUSS HEAD,M3X8 バインド タッピン ネジ	

FIGURE GB LIST OF CONNECTORS コネクター覧

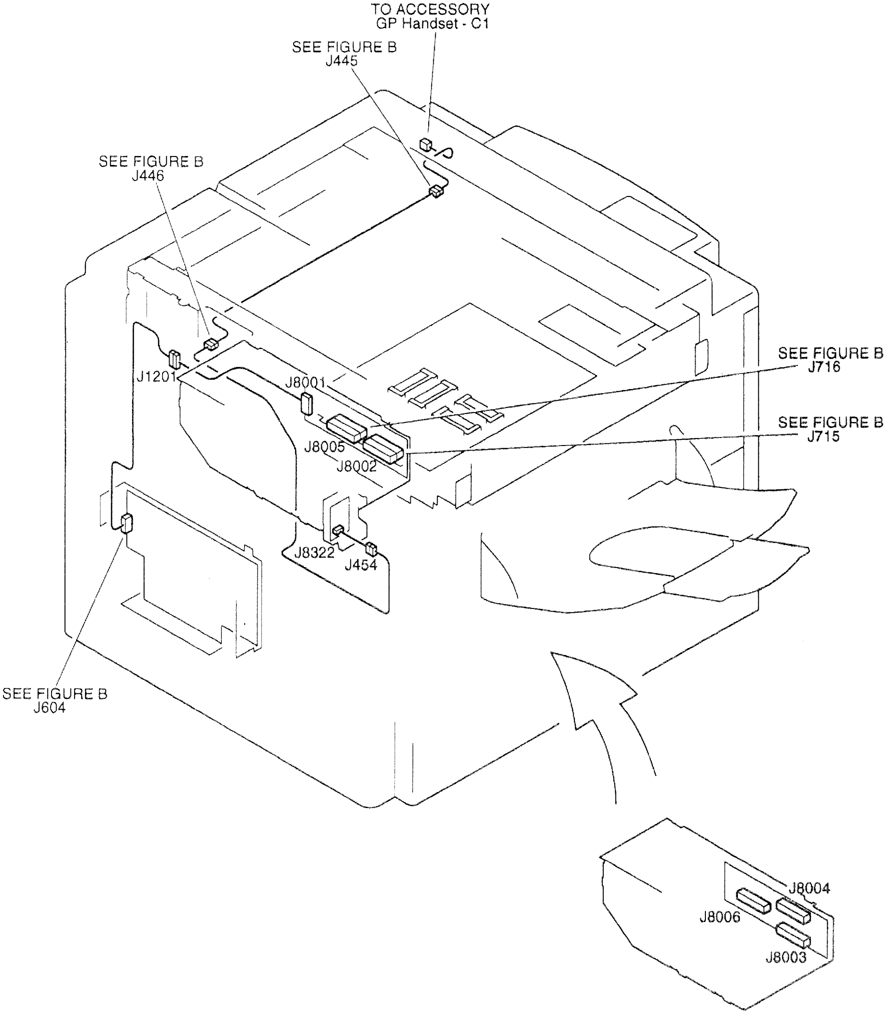

TO ACCESSORY
GP Handset - C1
SEE FIGURE B
J445
SEE FIGURE B
J446
J1201
J8001
SEE FIGURE B
J716
SEE FIGURE B
J715
J8005
J8002
J8322
J454
SEE FIGURE B
J604
J8004
J8006
J8003

FIGURE & KEY NO.	PART NUMBER	RANK	QTY	DESCRIPTION	SERIAL NUMBER / REMARKS
GB -	NPN		RF	LIST OF CONNECTORS コネクタ一覧	
J 454	SYS			TO COPIA 複写機 本体	
	VS1 – 6303 – 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	
	WS3 – 5570 – 000		2	SOCKET CONTACT, 22-28AWG ソケット コンタクト	
J 715	SYS			TO COPIA 複写機 本体	
	PCB			SYSTEM MOTHER システム マザー	
J 716	SYS			TO COPIA 複写機 本体	
	PCB			SYSTEM MOTHER システム マザー	
J 1201	SYS			TO COPIA 複写機 本体	
	VS1 – 5730 – 007		1	CONNECTOR, 7P, MALE コネクタ （オス）	
	WS3 – 5301 – 000		7	PIN CONTACT ピン コンタクト	
J 8001	PCB			SYSTEM MOTHER システム マザー	
	VS3 – 5083 – 007		1	CONNECTOR, 7P, FEMALE コネクタ （メス）	
	WS3 – 5160 – 000		7	SOCKET CONTACT, 18-24AWG ソケット コンタクト	
J 8002	SYS			TO COPIA 複写機 本体	
	PCB			SYSTEM MOTHER システム マザー	
J 8003	SYS			PDL INTERFACE PDLインターフェース	ACCESSORY
	PCB			SYSTEM MOTHER システム マザー	
J 8004	SYS			FAX BOARD FAXボード	ACCESSORY
	PCB			SYSTEM MOTHER システム マザー	
J 8005	SYS			TO COPIA 複写機 本体	
	PCB			SYSTEM MOTHER システム マザー	
J 8006	SYS			SCSI INTERFACE BOARD SCSIインターフェース ボード	ACCESSORY
	PCB			SYSTEM MOTHER システム マザー	
J 8322	SYS			MODULAR モジュラ	ACCESSORY
	VS3 – 5080 – 002		1	CONNECTOR, 2P, MALE コネクタ （オス）	
	WT1 – 5155 – 000		2	TERMINAL ターミナル	

Super G3 FAX Board - F1

スーパーG3ファクスボード・F1

for GP405/355/315
[100V 50/60Hz F61-7121]

for imageRUNNER 400S/330S
[120V 60Hz F61-7131]

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GA.　主要部品配置図

G12.　FAXキット

G92.　FAXボード回路基板

GB.　コネクター一覧

D6.　部品索引表

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GA. ASSEMBLY LOCATION DIAGRAM

G12. FAX KIT

G92. FAX BOARD PCB ASSEMBLY

GB. LIST OF CONNECTORS

D6. NUMERICAL INDEX

FIGURE GA ASSEMBLY LOCATION DIAGRAM
主要部品配置図

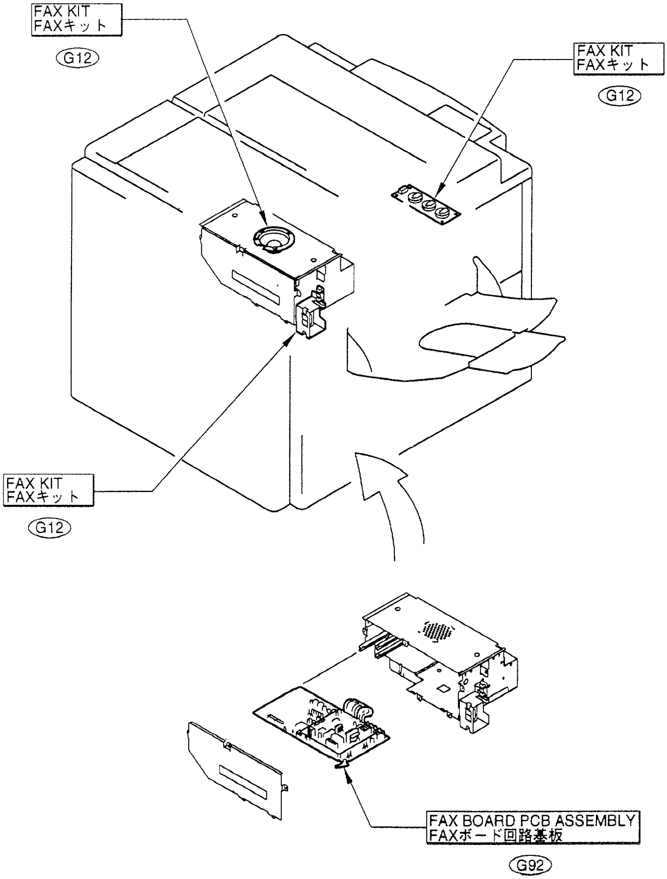
FAX KIT
FAXキット
G12
FAX KIT
FAXキット
G12
FAX KIT
FAXキット
G12
FAX BOARD PCB ASSEMBLY
FAXボード回路基板
G92

FIGURE G12 FAX KIT FAXキット

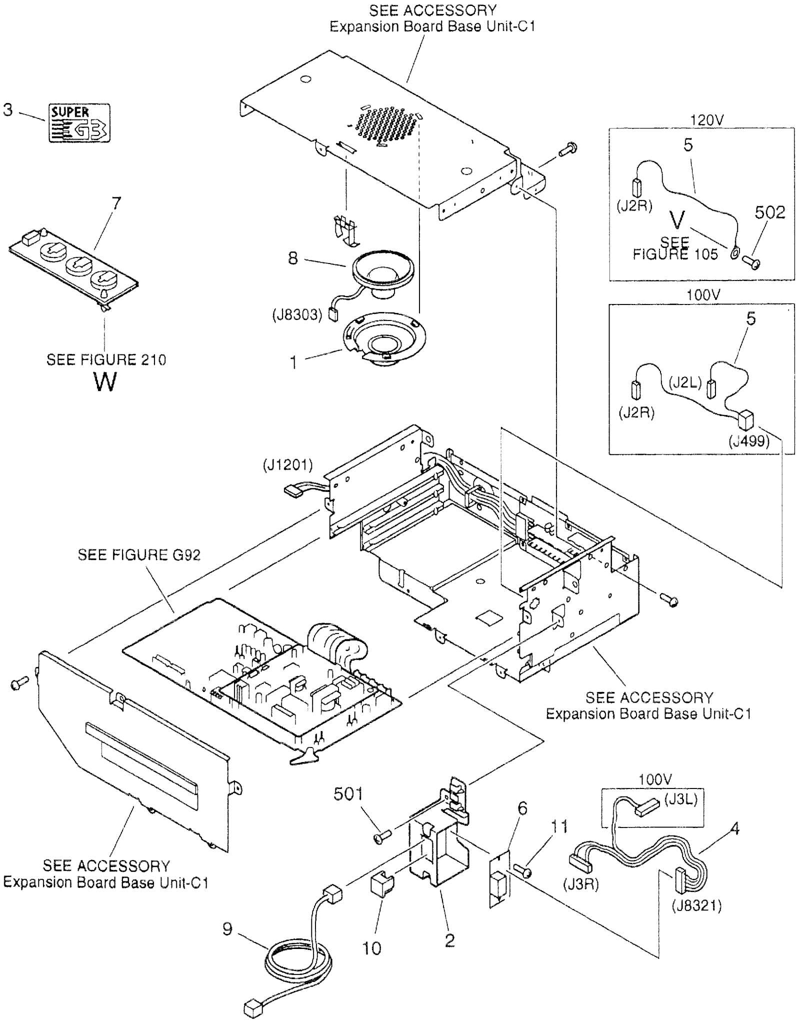
SEE ACCESSORY
Expansion Board Base Unit-C1
3
SUPER G3
7
SEE FIGURE 210
W
8
(J8303)
1
120V
5
(J2R)
V
SEE FIGURE 105
502
100V
5
(J2L)
(J2R)
(J499)
(J1201)
SEE FIGURE G92
SEE ACCESSORY
Expansion Board Base Unit-C1
501
6
11
100V
(J3L)
4
(J3R)
(J8321)
SEE ACCESSORY
Expansion Board Base Unit-C1
9
10
2

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
G12 -	NPN		RF	FAX KIT FAXキット	
1	FB4 − 3033 − 000		1	HOLDER, SPEAKER スピーカ　ホルダ	
2	FB4 − 3035 − 000		1	HOLDER, MODULAR JACK モジュラ　ジャック　ホルダ	
3	FB4 − 6724 − 000		1	LABEL, "SUPER G3" スーパーG3ラベル	100V
	FB4 − 6728 − 000		1	LABEL, "SUPER G3" スーパーG3ラベル	120V
4	FF3 − 2889 − 000		1	CABLE, MODULAR モジュラ束線	100V J3R,3L,8321
	FF3 − 3623 − 000		1	CABLE, MODULAR モジュラ束線	120V J3R,8321
5	FF3 − 2891 − 000		1	CABLE, ARESTA GROUNDING アレスタ　アース中継束線	100V J2R,2L,499
	FF3 − 3622 − 000		1	CABLE, ARESTA GROUNDING アレスタ　アース中継束線	120V J2R
6	FG2 − 9517 − 000		1	MODULAR JACK PCB UNIT モジュラ　ジャック回路基板	
7	FG6 − 3888 − 000		1	BATTERY BOARD PCB ASSEMBLY バッテリ　ボード回路基板	
8	FH6 − 3857 − 000		1	SPEAKER スピーカ	J8303
9	HH2 − 2484 − 000		1	CABLE, MODULAR モジュラ束線	
10	WS9 − 5038 − 000		1	SPACER, MODULAR モジュラ　スペーサ	
11	XA9 − 0591 − 000		2	SCREW,M3X8 タイト　ネジ	
501	XB1 − 2300 − 606		1	SCREW,MACH.,TRUSS HEAD,M3X6 バインド　ネジ	
502	XB2 − 7400 − 607		1	SCREW,W/WASHER,M4X6 バネツキ　バインド　ネジ	120V

FIGURE G92 FAX BOARD PCB ASSEMBLY
FAXボード回路基板

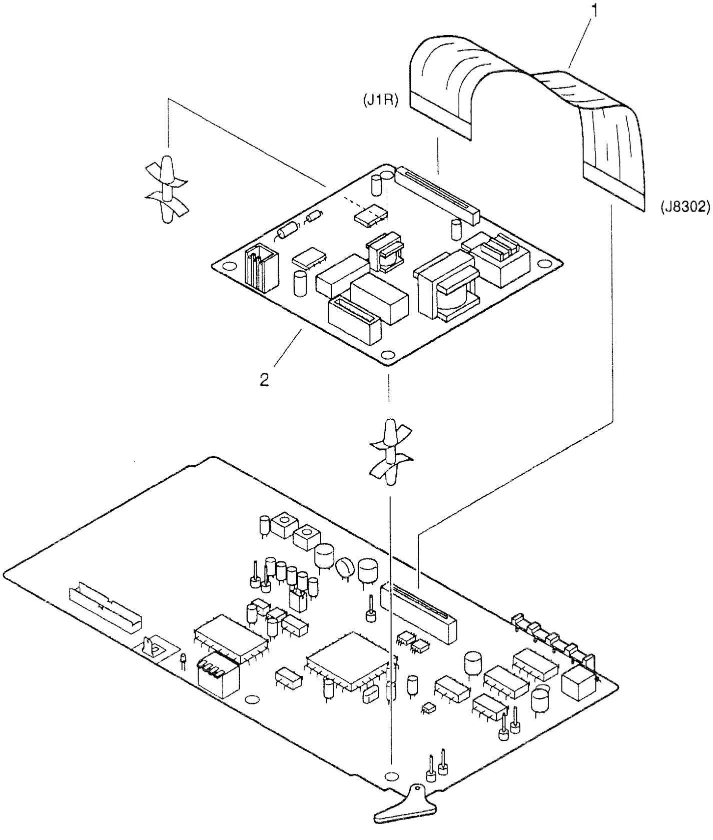

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
G92 -	FG2 — 9698 — 000		1	FAX BOARD PCB ASSEMBLY FAXボード回路基板	100V
	FG3 — 0232 — 000		1	FAX BOARD PCB ASSEMBLY FAXボード回路基板	120V
1	FH2 — 6341 — 000		1	CABLE, FCC FFC束線	J1R.8302
2	HG5 — 1039 — 000		1	NCU BOARD PCB ASSEMBLY NCUボード回路基板	100V
	HG1 — 4268 — 000		1	NCU BOARD PCB ASSEMBLY NCUボード回路基板	120V
CP1	FH9 — 0186 — 000		1	PIN, CHECK チェック ピン	100V
CP2	FH9 — 0186 — 000		1	PIN, CHECK チェック ピン	100V
FU1	VD7 — 0623 — 000		1	FUSE, 125A, 3A ヒューズ	
IC7	FH4 — 5982 — 000		1	IC, UPD65625GF-100, GATE ARRAY ゲート アレイ	
LED1	WG1 — 0373 — 000		1	LED, SEL2110R LED	

FIGURE GB LIST OF CONNECTORS コネクター覧

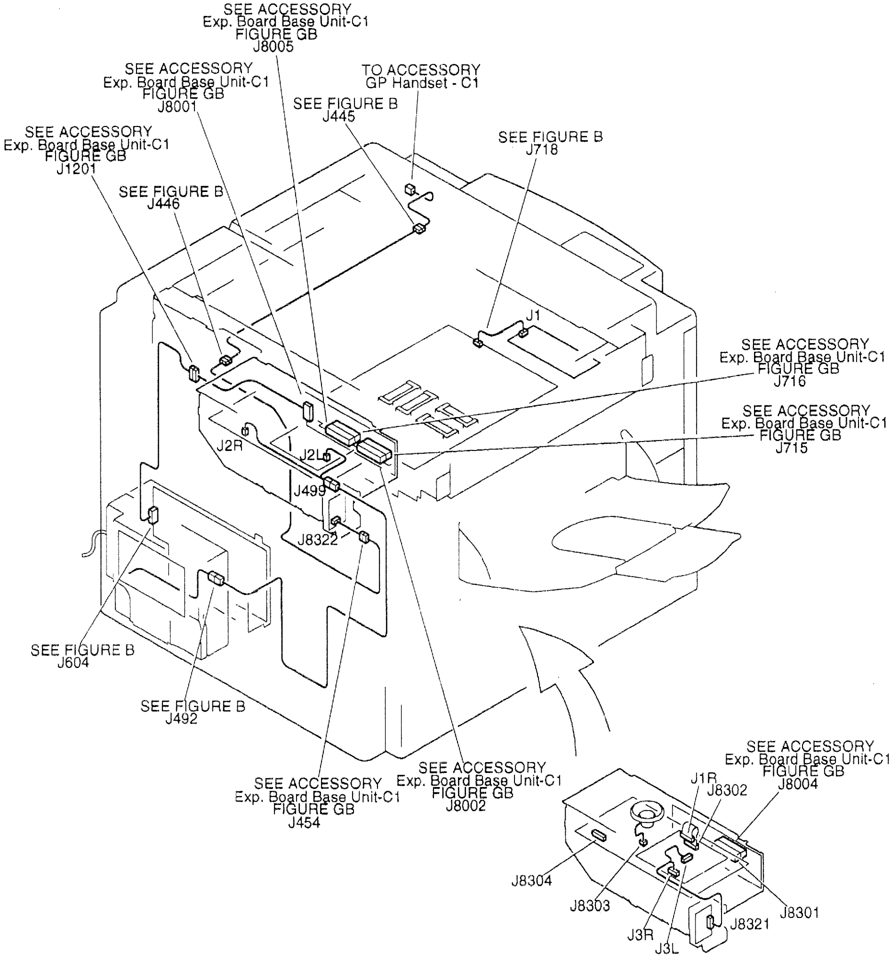
SEE ACCESSORY
Exp. Board Base Unit-C1
FIGURE GB
J8005
SEE ACCESSORY
Exp. Board Base Unit-C1
FIGURE GB
J8001
TO ACCESSORY
GP Handset - C1
SEE FIGURE B
J445
SEE ACCESSORY
Exp. Board Base Unit-C1
FIGURE GB
J1201
SEE FIGURE B
J718
SEE FIGURE B
J446
J1
SEE ACCESSORY
Exp. Board Base Unit-C1
FIGURE GB
J716
SEE ACCESSORY
Exp. Board Base Unit-C1
FIGURE GB
J715
J2R
J2L
J499
J8322
SEE FIGURE B
J604
SEE FIGURE B
J492
SEE ACCESSORY
Exp. Board Base Unit-C1
FIGURE GB
J8004
J1R
J8302
SEE ACCESSORY
Exp. Board Base Unit-C1
FIGURE GB
J8002
SEE ACCESSORY
Exp. Board Base Unit-C1
FIGURE GB
J454
J8304
J8303
J8301
J8321
J3R
J3L

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
GB -	NPN		RF	LIST OF CONNECTORS コネクター覧	
J 1	SYS			TO COPIA 複写機 本体	
	PCB			BATTERY BOARD バッテリ ボード	
J 1 R	PCB			NCU BOARD NCUボード	
	FH2 − 6341 − 000		1	CABLE, FCC FFC束線	
J 2 L	PCB			NCU BOARD NCUボード	100V
	WT1 − 5252 − 000		1	SLEEVE, FASTON ワンタッチ スリーブ	100V
J 2 R	PCB			FAX BOARD FAXボード	
	WT1 − 5252 − 000		1	SLEEVE, FASTON ワンタッチ スリーブ	
J 3 L	PCB			NCU BOARD NCUボード	100V
	VS3 − 5080 − 005		1	CONNECTOR, 5P, MALE コネクタ （オス）	100V
	WT1 − 5155 − 000		2	TERMINAL ターミナル	100V
J 3 R	PCB			NCU BOARD NCUボード	
	VS3 − 5080 − 005		1	CONNECTOR, 5P, MALE コネクタ （オス）	
	WT1 − 5155 − 000		4	TERMINAL ターミナル	
J 499	SYS			TO COPIA 複写機 本体	100V
	VS4 − 0002 − 002		1	CONNECTOR, 2P, FEMALE コネクタ （メス）	100V
	WS4 − 0217 − 000		2	SOCKET CONTACT, 22-18AWG ソケット コンタクト	100V
J 8004	SYS			SYSTEM MOTHER システム マザー	ACCESSORY
	PCB			FAX BOARD FAXボード	
J 8301	SYS			SYSTEM MOTHER システム マザー	ACCESSORY
	PCB			FAX BOARD FAXボード	
J 8302	PCB			FAX BOARD FAXボード	
	FH2 − 6341 − 000		1	CABLE, FCC FFC束線	
J 8303	PCB			FAX BOARD FAXボード	
	NPN			SPEAKER スピーカ	
J 8304	SYS			MULTI PORT マルチ ポート	ACCESSORY
	PCB			FAX BOARD FAXボード	
J 8321	PCB			MODULAR JACK モジュラ ジャック	
	VS3 − 5080 − 008		1	CONNECTOR, 8P, MALE コネクタ （オス）	

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
GB - J 8 3 2 1	WT1 — 5155 — 000		6	TERMINAL ターミナル	
J 8 3 2 2	SYS			HAND SET CONNECTING CABLE ハンド　セット中継束線	ACCESSORY
	PCB			MODULAR JACK モジュラ　ジャック	

Multi Port Kit - A1

マルチポートキット・A1

for GP405/355/315
[100V 50/60Hz F61-7112]

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GA.　主要部品配置図

G95.　マルチ　ポート　キット

GB.　コネクター一覧

D7.　部品索引表

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GA. ASSEMBLY LOCATION DIAGRAM

G95. MULTI PORT KIT

GB. LIST OF CONNECTORS

D7. NUMERICAL INDEX

FIGURE GA ASSEMBLY LOCATION DIAGRAM 主要部品配置図

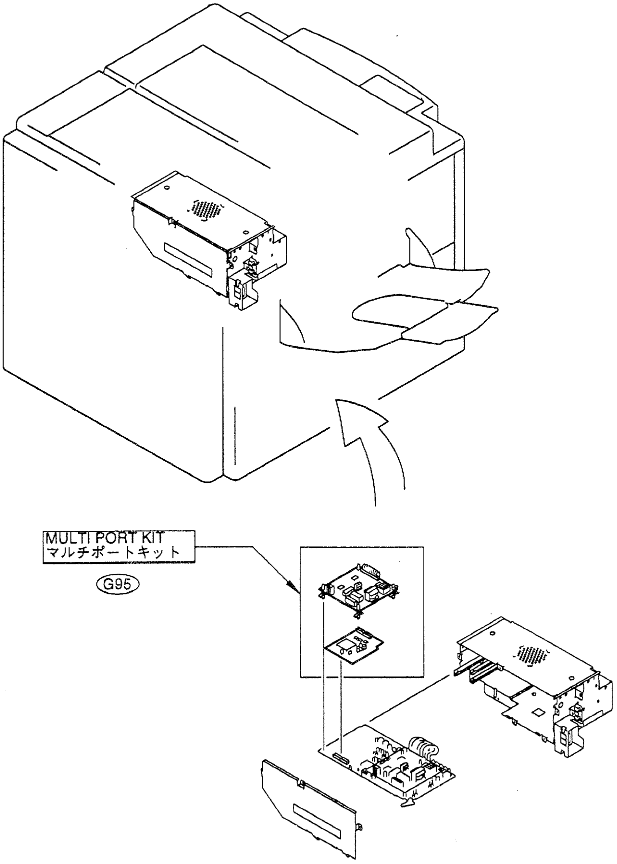
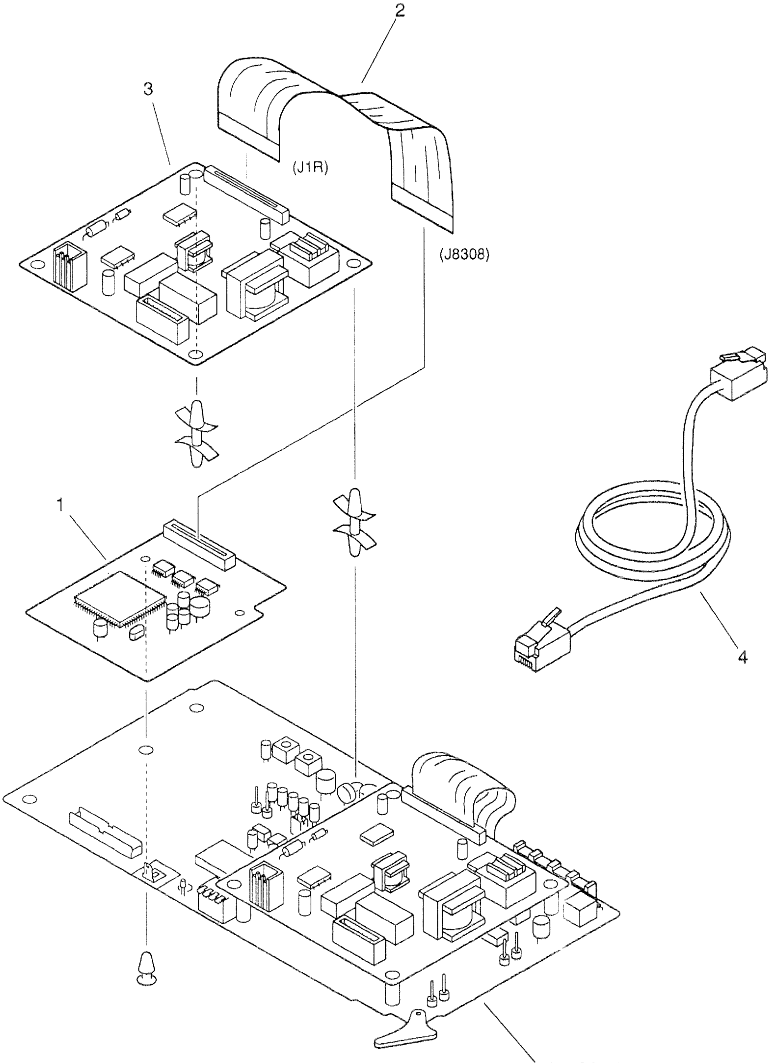

MULTI PORT KIT
マルチポートキット
G95

FIGURE G95 MULTI PORT KIT マルチ　ポート　キット



SEE ACCESSORY
Super G3 FAX Board-F1

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
G95 -	NPN		RF	MODEM UNIT モデム ユニット	
1	FG2 — 9697 — 000		1	MODEM PCB ASSEMBLY モデム回路基板	
2	FH2 — 6341 — 000		1	CABLE, FCC FFC束線	J1R,8302
3	HG5 — 1039 — 000		1	NCU BOARD PCB ASSEMBLY NCUボード回路基板	
4	HH2 — 2484 — 000		1	CABLE, MODULAR モジュラ束線	

FIGURE GB LIST OF CONNECTORS コネクタ一覧

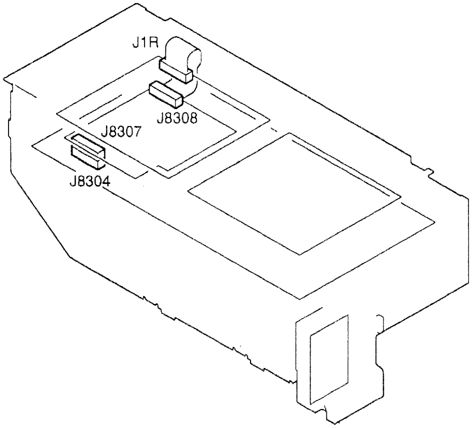

J1R
J8308
J8307
J8304

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
GB -	NPN		RF	LIST OF CONNECTORS コネクター覧	
J 1 R	PCB			NCU BOARD NCUボード	
	FH2 − 6341 − 000		1	CABLE, FCC FFC束線	
J 8 3 0 4	SYS			FAX BOARD FAXボード	ACCESSORY
	PCB			MODEM モデム	
J 8 3 0 7	SYS			FAX BOARD FAXボード	ACCESSORY
	PCB			MODEM モデム	
J 8 3 0 8	PCB			NCU BOARD NCUボード	
	FH2 − 6341 − 000		1	CABLE, FCC FFC束線	

Handset - C1
ハンドセット・C1

for GP405/355/315/40/35/31
[100V 50/60Hz F61-7181]

for imageRUNNER 400E/400S/330E/330S
[120V 60Hz F61-7191]

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FIGURE GA ASSEMBLY LOCATION DIAGRAM
主要部品配置図

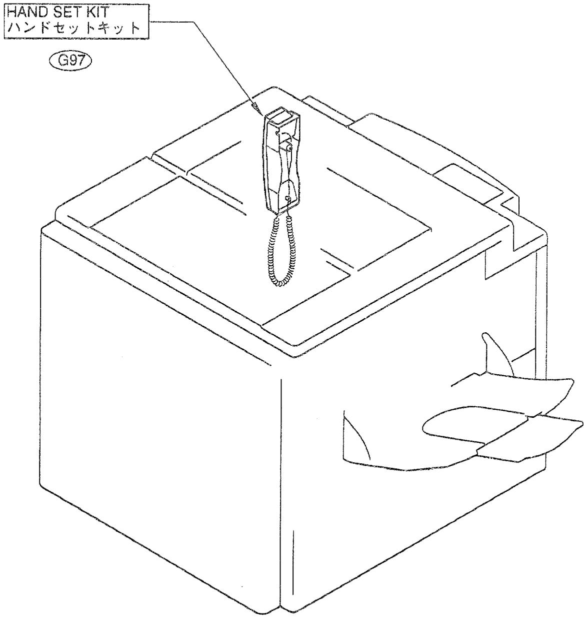
HAND SET KIT
ハンドセットキット
G97

FIGURE G97 HAND SET KIT ハンド　セット　キット

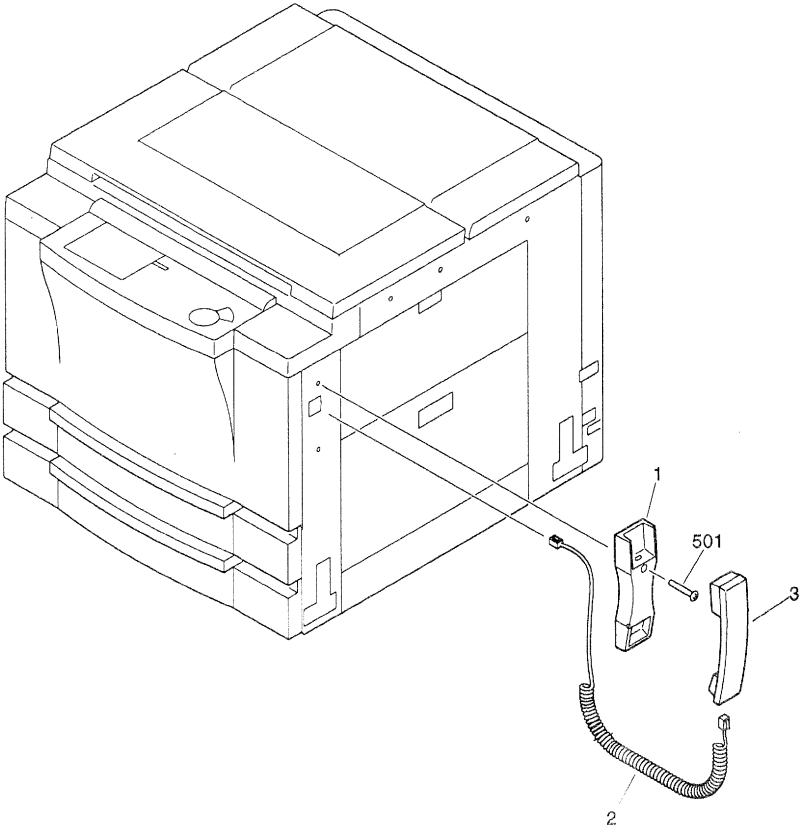

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
G97 -	NPN		RF	HAND SET KIT ハンド　セット　キット	
1	FB3 − 3177 − 020		1	HOLDER, HAND SET UNIT ハンド　セット台	
2	FH2 − 6471 − 000		1	CORD, CURL カール　コード	100V
	FH2 − 6730 − 000		1	CORD, CURL カール　コード	120V
3	HH7 − 2124 − 000		1	HAND SET UNIT CT−17ハンド　セット　ユニット	100V
	HH7 − 2104 − 000		1	HAND SET UNIT CT−17ハンド　セット　ユニット	120V
501	XB1 − 2401 − 607		1	SCREW,MACH.,TRUSS HEAD,M4X16 バインド　ネジ	

Network Interface Board - C1

ネットワーク インターフェース ボード・C1

for GP405/355/315
〔 100V 50/60Hz F61-7105 〕

目　次

NA.　主要部品配置図

N90.　イーサネット　ボード回路基板

D9.　部品索引表

CONTENTS

NA. ASSEMBLY LOCATION DIAGRAM

N90. ETHERNET BOARD PCB ASSEMBLY

D9. NUMERICAL INDEX

FIGURE NA ASSEMBLY LOCATION DIAGRAM 主要部品配置図

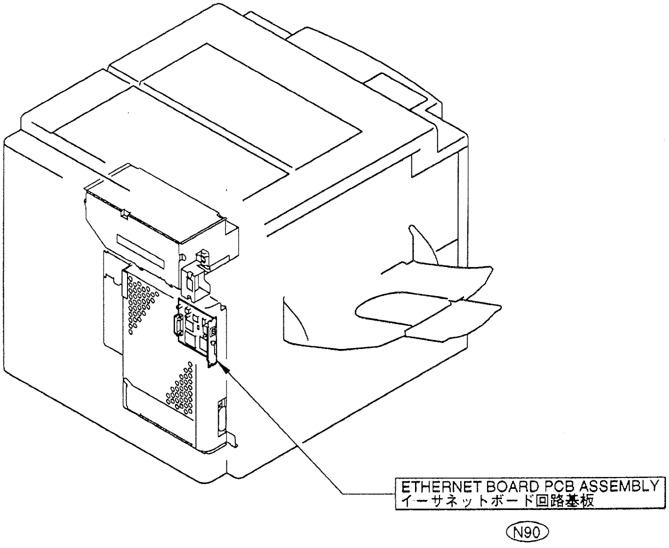
ETHERNET BOARD PCB ASSEMBLY
イーサネットボード回路基板
N90

FIGURE N90 ETHERNET BOARD PCB ASSEMBLY
イーサネット　ボード回路基板

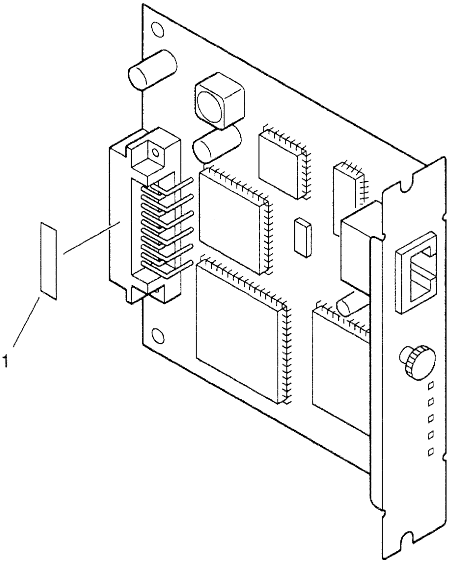

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
N90 -	FG3 − 0121 − 000		1	ETHERNET BOARD PCB ASSEMBLY イーサネット ボード回路基板	
1	FC2 − 9589 − 000		1	LABEL, MAC ADDRESS MACアドレス ラベル	
FU1	VD7 − 1861 − 301		1	CHIP FUSE, 1.25A チップ ヒューズ	
IC10	FF3 − 3487 − 000		1	IC, MBM29LV160T-90PFTN, F.-ROM フラッシューROM	
IC11	FF3 − 3488 − 000		1	IC, MBM29LV160B-90PFTN, F.-ROM フラッシューROM	
LED1	WG1 − 5593 − 000		1	LED LED	
LED2	WG1 − 5593 − 000		1	LED LED	
LED3	WG1 − 5593 − 000		1	LED LED	
LED5	WG1 − 5593 − 000		1	LED LED	
LED6	WG1 − 5594 − 000		1	LED LED	

LIPS Printer Board - D1

LIPS プリンタボード・D1

for GP405/355/315
〔 100V 50/60Hz F61-7114 〕

目　次

UA.　主要部品配置図

U10.　LIPSプリンタ　ボード　キット

U90.　LIPSプリンタ　ボード回路基板
U95.　PDLインターフェース回路基板

UB.　コネクター覧

D10.　部品索引表

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UA. ASSEMBLY LOCATION DIAGRAM

U10. LIPS PRINTER BOARD KIT

U90. LIPS PRINTER BOARD PCB ASSEMBLY
U95. PDL INTERFACE PCB ASSEMBLY

UB. LIST OF CONNECTORS

D10. NUMERICAL INDEX

FIGURE UA ASSEMBLY LOCATION DIAGRAM
主要部品配置図

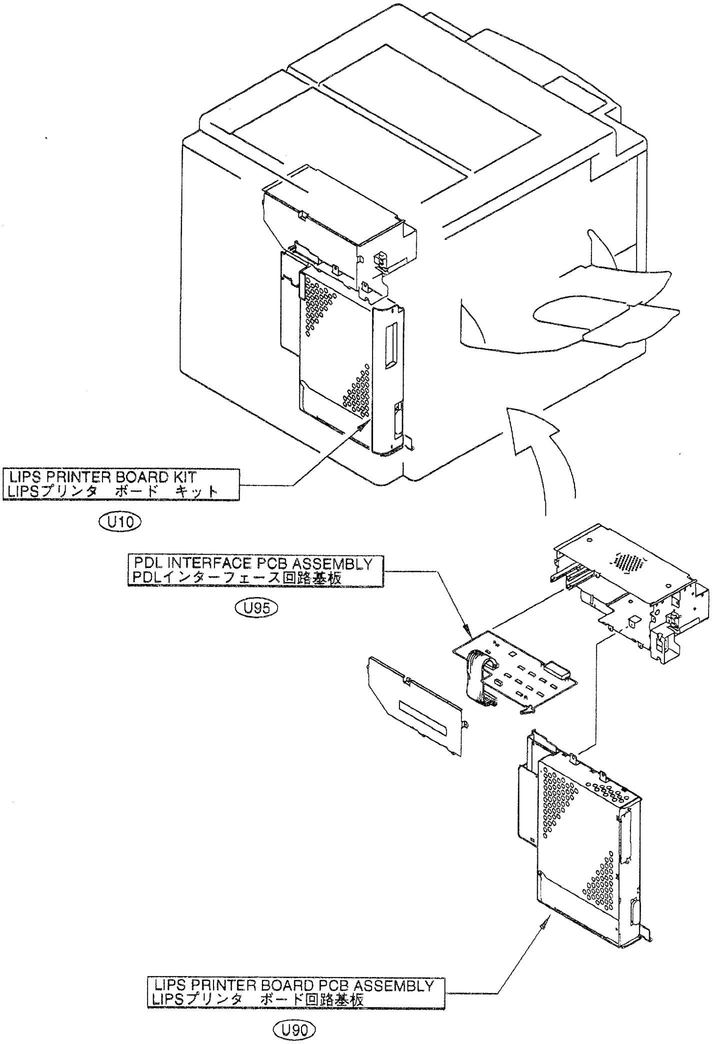
LIPS PRINTER BOARD KIT
LIPSプリンタ ボード キット
U10
PDL INTERFACE PCB ASSEMBLY
PDLインターフェース回路基板
U95
LIPS PRINTER BOARD PCB ASSEMBLY
LIPSプリンタ ボード回路基板
U90

FIGURE U10 LIPS PRINTER BOARD KIT
LIPSプリンタ　ボード　キット

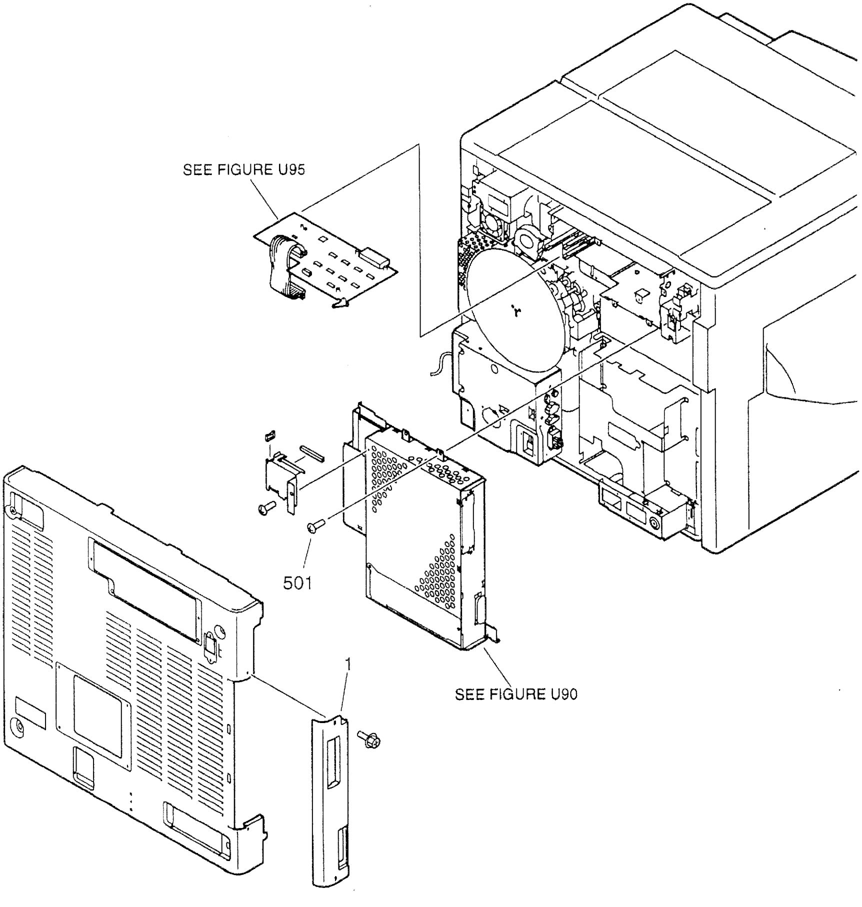
SEE FIGURE U95
501
1
SEE FIGURE U90

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
U10 -	NPN		RF	LIPS PRINTER BOARD KIT LIPSプリンタ　ボード　キット	
1	FB4 − 3326 − 000		1	COVER, PCB BLANKING 基板目隠しカバー	
5 0 1	XB1 − 2400 − 606		5	SCREW,MACH.,TRUSS HEAD,M4X6 バインド　ネジ	

FIGURE U90 LIPS PRINTER BOARD PCB ASSEMBLY
LIPSプリンタ　ボード回路基板

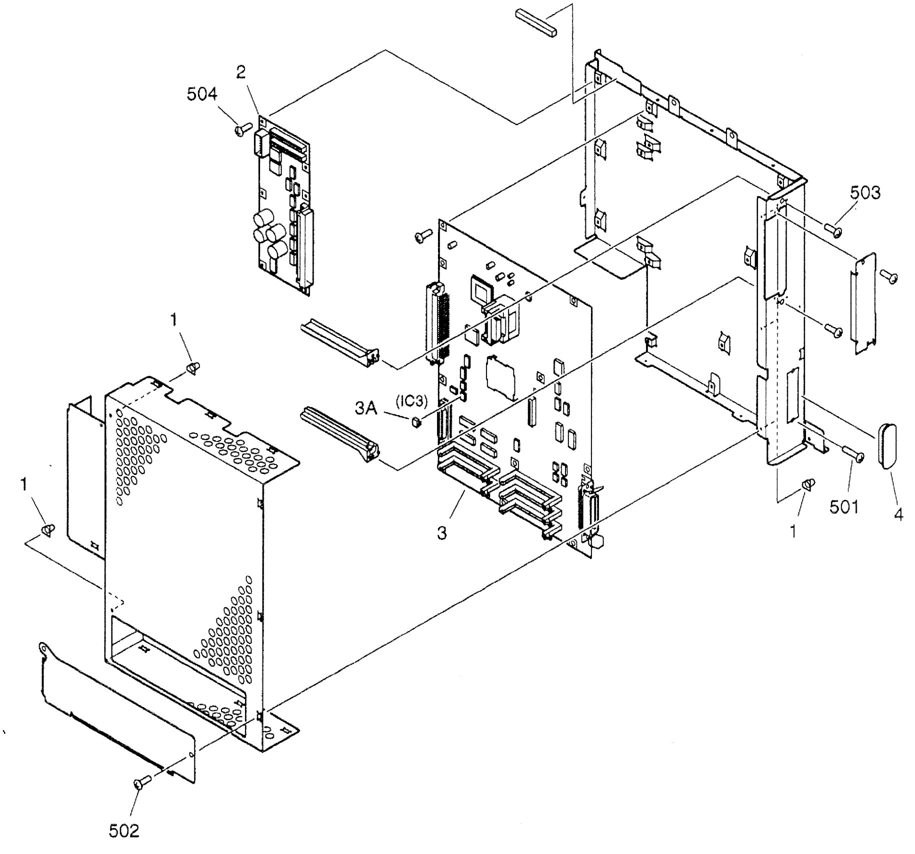
2
504
503
1
3A
(IC3)
1
3
501
4
1
502

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
U90 -	FG6 – 0522 – 000		1	LIPS PRINTER BOARD PCB ASS'Y LIPSプリンタ　ボード回路基板	
1	FB3 – 2351 – 000		5	CAP, DUST-PROOF ダスト　キャップ	
2	FG2 – 9717 – 000		1	PRINTER MOTHER PCB ASSEMBLY プリンタ　マザー回路基板	
3	FG3 – 0117 – 000		1	LIPS PRINTER BOARD PCB ASS'Y LIPSプリンタ　ボード回路基板	
3A	FF3 – 3474 – 000		1	IC, NM93C86AN, EP-ROM EP–ROM	IC3
4	WS9 – 0104 – 000		1	CAP, DUST ダスト　キャップ	
501	XB1 – 1301 – 007		2	SCREW,MACH.,PAN HEAD,M3X10 ナベ　ネジ	
502	XB1 – 2300 – 606		12	SCREW,MACH.,TRUSS HEAD,M3X6 バインド　ネジ	
503	XB4 – 7400 – 607		2	SCREW,TAPPING,TRUSS HEAD,M4X6 バインド　タッピン　ネジ	
504	XB6 – 7300 – 605		16	SCREW,TP,M3X6 TP　ネジ	
IC2	RH4 – 5372 – 000		1	IC, HG51D309TB, ASIC ASIC	
IC4	FH4 – 3729 – 000		1	IC, MSM27C3255CZ-NGS-K,OTP-ROM OTP–ROM	
IC23	FH4 – 6012 – 000		1	IC, TC200E1002AF-02, ASIC ASIC	
J2	RH2 – 5391 – 000		1	CONNECTOR, 40P コネクタ	
J3	RH2 – 5275 – 000		1	SOCKET, DIMM DIMMソケット	
J4	RH2 – 5275 – 000		1	SOCKET, DIMM DIMMソケット	
J5	RH2 – 5275 – 000		1	SOCKET, DIMM DIMMソケット	

FIGURE U95 PDL INTERFACE PCB ASSEMBLY
PDLインターフェース回路基板

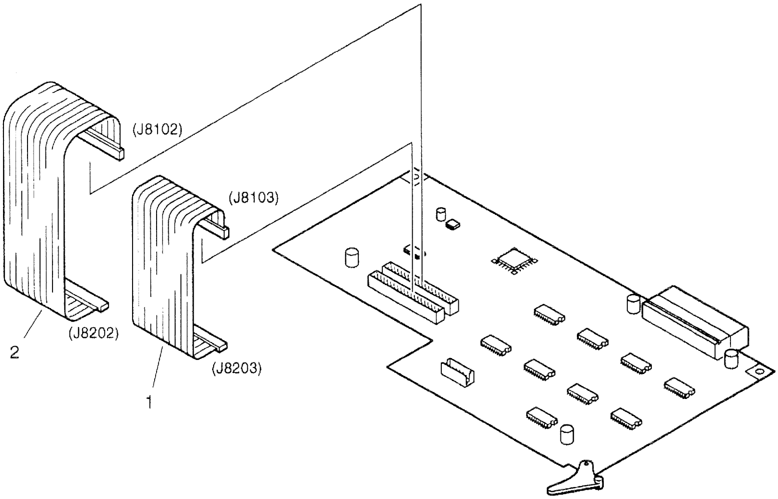

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
U95 -	FG3 − 0138 − 000		1	PDL INTERFACE PCB ASSEMBLY PDLインターフェース回路基板	
1	FH2 − 6472 − 000		1	CABLE, FLAT, 1 フラット ケーブル (1)	J8103,8203
2	FH2 − 6473 − 000		1	CABLE, FLAT, 2 フラット ケーブル (2)	J8102,8202
FU8101	VD7 − 0622 − 001		1	FUSE, 125V, 2A ヒューズ	
FU8102	VD7 − 0621 − 001		1	FUSE, 125V, 1A ヒューズ	
IC 775	FH4 − 6005 − 000		1	IC, XC9536-10VQ44C4,GATE ARRAY ゲート アレイ	
IC8231	FH9 − 0634 − 000		1	IC, W42C31-09(G DOT), DRIVER ドライバ IC	

FIGURE UB LIST OF CONNECTORS コネクター覧

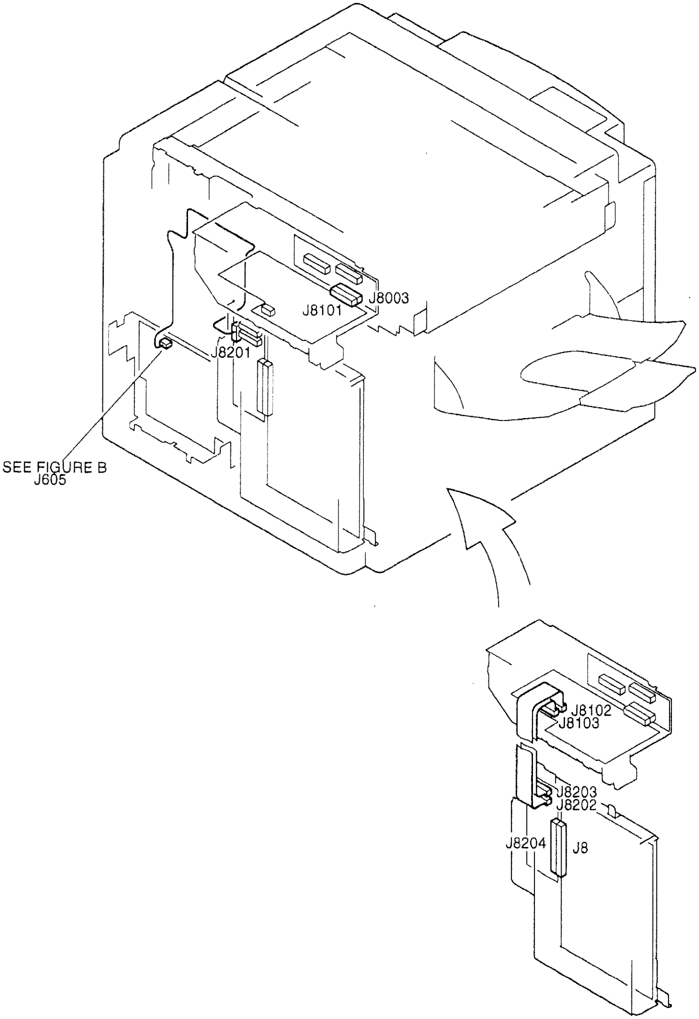
J8003
J8101
J8201
SEE FIGURE B
J605
J8102
J8103
J8203
J8202
J8204
J8

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
UB -	NPN		RF	LIST OF CONNECTORS コネクター覧	
J 8	PCB			LIPS PRINTER BOARD LIPSプリンタ ボード	
	PCB			PRINTER MOTHER プリンタ マザー	
J8003	SYS			SYSTEM MOTHER システム マザー	ACCSSSORY
	PCB			PDL INTERFACE PDLインターフェース	
J8101	SYS			SYSTEM MOTHER システム マザー	ACCESSORY
	PCB			PDL INTERFACE PDLインターフェース	
J8102	PCB			PDL INTERFACE PDLインターフェース	
	FH2 — 6473 — 000		1	CABLE, FLAT, 2 フラット ケーブル (2)	
J8103	PCB			PDL INTERFACE PDLインターフェース	
	FH2 — 6472 — 000		1	CABLE, FLAT, 1 フラット ケーブル (1)	
J8201	SYS			TO COPIA 複写機 本体	
	PCB			PRINTER MOTHER プリンタ マザー	
J8202	PCB			PRINTER MOTHER プリンタ マザー	
	FH2 — 6473 — 000		1	CABLE, FLAT, 2 フラット ケーブル (2)	
J8203	PCB			PRINTER MOTHER プリンタ マザー	
	FH2 — 6472 — 000		1	CABLE, FLAT, 1 フラット ケーブル (1)	
J8204	PCB			LIPS PRINTER BOARD LIPSプリンタ ボード	
	PCB			PRINTER MOTHER プリンタ マザー	

SCSI Interface Board - D1

SCSIインターフェースボード・D1

for GP405/355/335/315
for imageRUNNER 400E/400S/330E/330S
〔 F61-7107 〕

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YA.　主要部品配置図

Y90.　SCSIボード回路基板

D11.　部品索引表

CONTENTS

YA. ASSEMBLY LOCATION DIAGRAM

Y90. SCSI BOARD PCB ASSEMBLY

D11. NUMERICAL INDEX

FIGURE YA ASSEMBLY LOCATION DIAGRAM 主要部品配置図

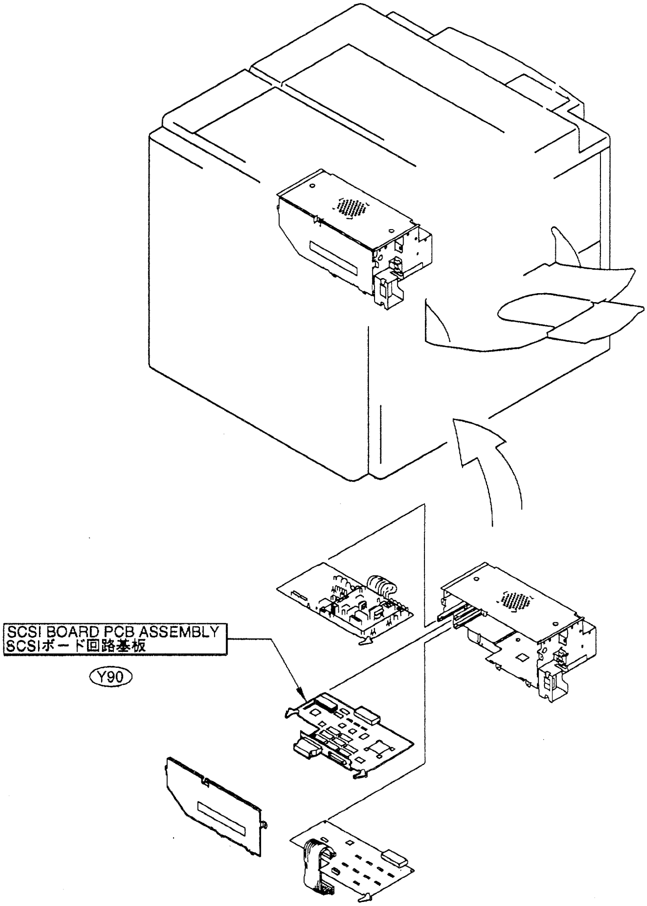
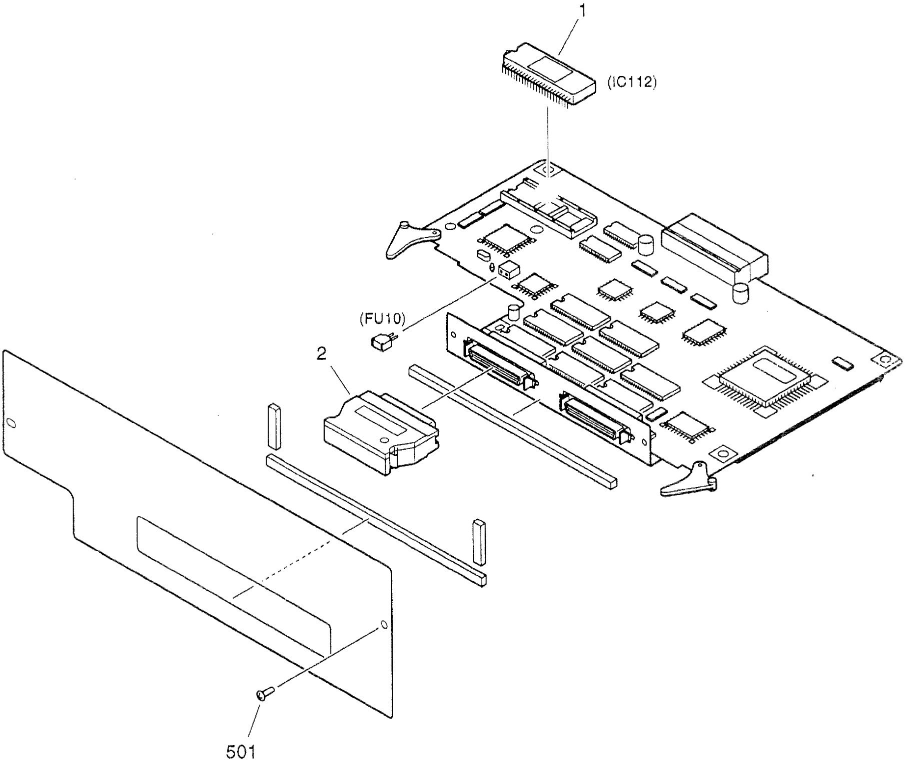

SCSI BOARD PCB ASSEMBLY
SCSIボード回路基板
Y90

FIGURE Y90 SCSI BOARD PCB ASSEMBLY SCSIボード回路基板



NOTE:This assembly does not include the parts shown with key No.2 and 501.
注：このユニットにKey No. 2、501の部品は含まれません。

FIGURE & KEY NO.	PART NUMBER	RANK	Q'TY	DESCRIPTION	SERIAL NUMBER / REMARKS
Y90 -	FG6 — 0494 — 000		1	SCSI BOARD PCB ASSEMBLY SCSIボード回路基板	
1	FF3 — 3637 — 000		1	IC, HN27C4096AHG-85, EP-ROM EP—ROM	IC112
2	WS1 — 5531 — 000		1	TERMINATOR, SCSI SCSIターミネータ	SEE NOTE
501	XB1 — 2300 — 606		2	SCREW,MACH.,TRUSS HEAD,M3X6 バインド ネジ	SEE NOTE
FU 10	VD5 — 0221 — 001		1	FUSE, 1A 48V ヒューズ	
FU101	WD9 — 0044 — 000		1	HOLDER, FUSE ヒューズ ホルダ	
IC116	FH4 — 5216 — 000		1	IC, MB622126U, GATE ARRAY ゲート アレイ	
IC138	FH4 — 5844 — 000		1	IC, HC [illegible]G010R34FBN, GATE ARRAY ゲート アレイ	
IC145	FH4 — 5846 — 000		1	IC, UPD65811GL-027-NMU,G.ARRAY ゲート アレイ	
LED101	WG1 — 5309 — 000		1	LED, SEL6210R LED	

C LIST OF STANDARD FASTENERS
機械標準部品一覧表

I. SCREWS ······ C-2
- A. Machine screws (for precision use) ······ C-3
- B. Pan head machine screws ······ C-3
- E. Binding head machine screws ······ C-3
- F. Flat head machine screws ······ C-3
- G. Self-tapping screws ······ C-3
- H. Pan head machine screws with captive spring washer ······ C-3
- K. Washer head machine screws ······ C-4
- L. Hex socket setscrews and socket head cap screws ······ C-4

II. NUTS ······ C-4
- M. Hexagon nuts ······ C-4

III. WASHERS AND SHIM WASHERS ······ C-5
- N. S &T. Shim washers ······ C-5
- U. Plain Washers, spring washers & toothed lock washers ······ C-6

IV. RETAINING RINGS ······ C-7
- V. E rings ······ C-7
- W. Grip rings ······ C-7
- X. C rings ······ C-8

V. PINS ······ C-9
- Y. Spring and dowel pins ······ C-9

VI. SPACERS ······ C-9
- Z. Spacers ······ C-9

I. ネジ ······ C-2
- A. 精密機器用小ネジ ······ C-3
- B. ナベ小ネジ ······ C-3
- E. バインド小ネジ ······ C-3
- F. サラ小ネジ ······ C-3
- G. タッピンネジ ······ C-3
- H. バネ座金付き十字ナベ小ネジ ······ C-3
- K. TP小ネジ ······ C-4
- L. 六角穴付き止めネジおよび六角穴付きボルト ······ C-4

II. ナット ······ C-4
- M. 六角ナット ······ C-4

III. ワッシャ ······ C-5
- N. S&T. 標準ワッシャ ······ C-5
- U. 平座金、バネ座金および歯付き座金 ······ C-6

IV. 止め輪 ······ C-7
- V. E形止め輪 ······ C-7
- W. グリップ止め輪 ······ C-7
- X. C形止め輪 ······ C-8

V. ピン ······ C-9
- Y. スプリングピンおよび平行ピン ······ C-9

VI. スペーサ ······ C-9
- Z. スペーサ ······ C-9

I. SCREWS
ネジ

How to read Part Numbers
部品番号の見方

Screws (except socket head cap screws)
ネジ（六角穴付ボルトを除く）

XB1-2400-609

Classification symbol 類別番号	Binding head machine screw バインドネジ
Nominal diameter (d) 呼び径（d）	M4.0
Length (ℓ) 長さ（ℓ）	6.0mm
Material and surface treatment 材料および表面処理	Steel (black zinc plated) See table 1. 鋼材（黒色亜鉛メッキ） 表1参照

Socket head cap screws
六角穴付ボルト

XB7-1080-409

Classification symbol 類別番号	Socket head cap screw 六角穴付きボルト
Nominal diameter (d) 呼び径（d）	M8
Length (ℓ) 長さ（ℓ）	40mm
Material and surface treatment 材料および表面処理	Steel (black zinc plated) See table 1. 鋼材（黒色亜鉛メッキ） 表1参照

Material and surface treatment

No.	Material	Surface treatment	Color
1	Stainless	Blackened	Black
2		Without surface treatment	White
3	Brass	Nickel plated	White
4		Black nickel plated	Black
5	Steel	Zinc plated	Yellow
6		Nickel and chrome plated	White
7		Nickel plated	White
8		Phosphated	Black
9		Black zinc plated	Black

Table 1

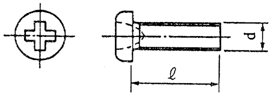
材料および表面処理

番号	材質	表面処理	色
1	ステンレス	黒着色	黒
2		なし	白
3	黄銅	ニッケルメッキ	白
4		黒色ニッケルメッキ	黒
5	鋼	亜鉛メッキ	黄
6		ニッケルクロムメッキ	白
7		ニッケルメッキ	白
8		鉄鋼燐酸塩被膜	黒
9		黒色亜鉛メッキ	黒

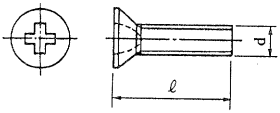
表 1

A. MACHINE SCREWS (FOR PRECISION USE)
精密機器用小ネジ

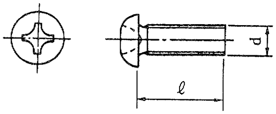
Pan head machine screws
ナベ小ネジ



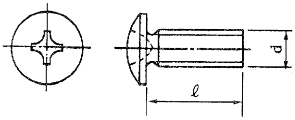
Flat head machine screws
サラ小ネジ



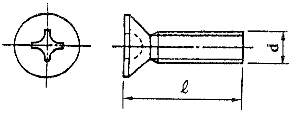
B. PAN HEAD MACHINE SCREWS
ナベ小ネジ



E. BINDING HEAD MACHINE SCREWS
バインド小ネジ

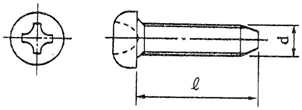


F. FLAT HEAD MACHINE SCREWS
サラ小ネジ

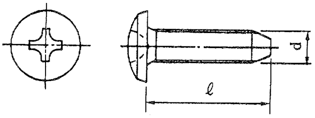


G. SELF-TAPPING SCREWS
タッピンネジ

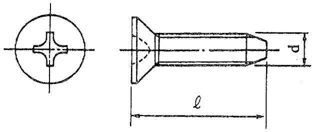
Pan head self-tapping screws
ナベタッピンネジ



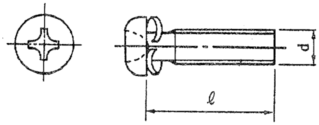
Binding head self-tapping screws
バインドタッピンネジ



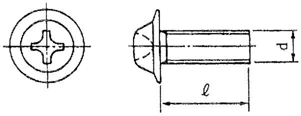
Flat head self-tapping screws
サラタッピンネジ



H. PAN HEAD MACHINE SCREWS WITH CAPTIVE SPRING WASHER
バネ座金付き十字ナベ小ネジ

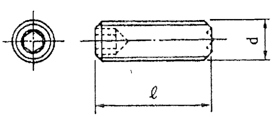


K. WASHER HEAD MACHINE SCREWS
TP小ネジ

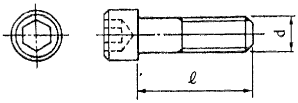


L. HEX SOCKET SETSCREWS AND SOCKET HEAD CAP SCREWS
六角穴付き止めネジおよび六角穴付きボルト

Hex socket setscrews
六角穴付き止めネジ



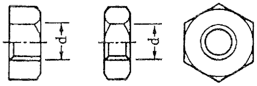
Socket head cap screws
六角穴付きボルト



II. NUTS
ナット

M. HEXAGON NUTS
六角ナット

class 1　　class 3
1 種　　3 種



How to read Part Numbers
部品番号の見方

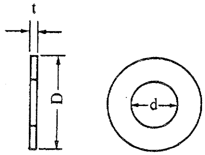
XB7 – 2100 – 309

- XB7 – 210: Hexagon nut 六角ナット
- 0 – 30: Material and surface treatment .... Steel (black zinc plated) 材料および表面処理 鋼材（黒色亜鉛メッキ）
- 9: Nominal diameter (d) ... M3 呼び径（d）

XB7 – 210 .... class 1
1種
XB7 – 220 .... class 3
3種

III. WASHERS AND SHIM WASHERS
ワッシャ

N, S&T. SHIM WASHERS
標準ワッシャ



How to read Part Numbers
部品番号の見方

XD1-1102-625

Shim washer
標準ワッシャ

Inner diameter (d) ... 2.6mm
内径（d）

Outer diameter (D)... Class 2 (See table 2)
外径（D） 2種（表2参照）

Thickness code (t) ... 0.5mm
板厚番号（t） See table 3
表3参照

* Material : Brass
材 料 ：黄 銅

d (mm)	D (mm)		
	Class 1 1種	Class 2 2種	Class 3 3種
1.5	–	2.6	3.2
1.8	2.7	3.1	3.7
2.1	3.2	3.6	4.2
2.3	3.6	4	4.6
2.6	4	4.4	5
3.1	4.6	5	5.6
3.6	5.4	5.8	6.4
4.1	5.7	6.6	8
4.6	6.4	7.4	9
5.2	7.2	8.2	10
5.7	7.8	9	11
6.2	8.5	9.8	12
6.7	9.2	10.5	13
7.2	10	11.4	14
7.7	10.6	12.2	15
8.2	11.4	13	16
8.7	12	13.8	17
9.2	12.8	14.6	18
9.7	13.5	15.4	19

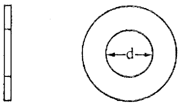
Table 2 表2

Thickness code 板厚番号	t (mm)
0	0.05
1	0.1
2	0.2
3	0.3
4	0.4
5	0.5
6	0.6
7	0.7
8	0.8
9	1

Table 3 表3

U. PLAIN WASHERS, SPRING WASHERS & TOOTHED LOCK WASHERS
平座金、バネ座金および歯付き座金

Plain washers
平座金

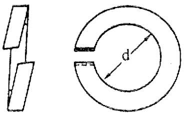


How to read Part Numbers
部品番号の見方

XD1-2100-307

- XD1-2100: Plain washer 平座金
- 30: Inner diameter (d) .... 3.0mm 呼び径 (d)
- 7: Material and surface treatment .... Steel (nickel plated) 材料および表面処理 鋼材（ニッケルメッキ）

Spring washers
バネ座金

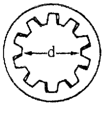


How to read Part Numbers
部品番号の見方

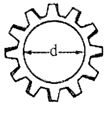
XD1-3100-507

- XD1-3100: Spring washer バネ座金
- 50: Inner diameter (d) .... 5.0mm 呼び径 (d)
- 7: Material and surface treatment .... Steel (nickel plated) 材料および表面処理 鋼材（ニッケルメッキ）

Toothed lock washers
歯付き座金



Inner toothed type 内歯形



Outer toothed type 外歯形

How to read Part Numbers
部品番号の見方

XD1-4100-302

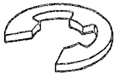
- XD1-4100: Toothed lock washer 歯付き座金
- 30: Inner diameter (d) .... 3mm 呼び径 (d)
- 2: Material and surface treatment .... Stainless (without surface treatment) 材料および表面処理 ステンレス（表面処理なし）

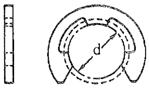
XD1-410... Inner toothed type 内歯形

XD1-420... Outer toothed type 外歯形

IV. RETAINING RINGS
止め輪

V. E RINGS
E形止め輪





How to read Part Numbers
部品番号の見方

XD2-1100-172

- XD2-1100: E ring / E形止め輪
- 7: Material and surface treatment / 材料および表面処理
- 2: Inner diameter (d) .... 1.7mm / 呼び径 (d)

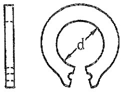
XD2 – 110... Class 1
1種

XD2 – 120... Class 2
2種

2 .... Stainless (without surface treatment)
ステンレス（表面処理なし）

7 .... Steel (nickel plated)
鋼材（ニッケルメッキ）

W. GRIP RINGS
グリップ止め輪

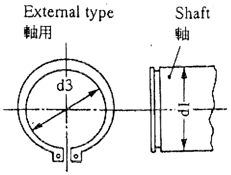


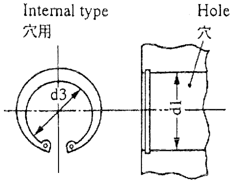
How to read Part Numbers
部品番号の見方

XD2-2100-502

- XD2-2100: Grip ring / グリップ止め輪
- 5: Inner diameter (d) .... 5.0mm / 呼び径 (d)
- 0: Material and surface treatment .... Stainless (without surface treatment) / 材料および表面処理 ステンレス（表面処理なし）

X. C RINGS
C形止め輪





How to read Part Numbers
部品番号の見方

XD2-3100-202

Nominal diameter (d1) 20mm
呼び径 (d1)

C ring
C形止め輪

Material and surface treatment
材料および表面処理

2 .... Stainless (without surface treatment)
ステンレス (表面処理なし)
8 .... Steel (phosphated)
鋼材 (鉄鋼燐酸塩被膜)

XD2 – 310... External type
軸用
XD2 – 320... Internal type
穴用

External type
軸用

Nominal diameter 呼び径	d1 (mm)	d3 (mm)
010	10	9.3
012	12	11.1
014	14	12.9
015	15	13.8
016	16	14.7
017	17	15.7
018	18	16.5
020	20	18.5
022	22	20.5
025	25	23.2
028	28	25.9
030	30	27.9
032	32	29.6
035	35	32.2

Table 4 表4

Internal type
穴用

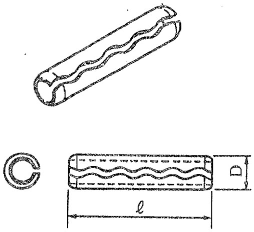
Nominal diameter 呼び径	d1 (mm)	d3 (mm)	Nominal diameter 呼び径	d1 (mm)	d3 (mm)
010	10	10.7	040	40	43.5
011	11	11.8	042	42	45.5
012	12	13	045	45	48.5
014	14	15.1	047	47	50.5
016	16	17.3	050	50	54.2
018	18	19.5	052	52	56.2
019	19	20.5	055	55	59.2
020	20	21.5	060	60	64.2
022	22	23.5	062	62	66.2
025	25	26.9	068	68	72.5
028	28	30.1	072	72	76.5
030	30	32.1	075	75	79.5
032	32	34.4	080	80	85.5
035	35	37.8	085	85	90.5
037	37	39.8	090	90	95.5
			095	95	100.5

Table 5 表5

V. PINS
ピン

Y. SPRING AND DOWEL PINS
スプリングピンおよび平行ピン

Spring pins
スプリングピン



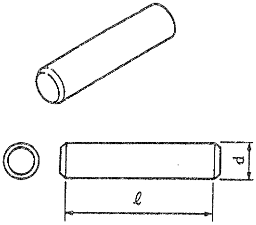
How to read Part Numbers
部品番号の見方

XD3-1200-122

Spring pin
スプリングピン

Nominal diameter (D) 呼び径 (D)	2.0mm
Length (ℓ) 長さ (ℓ)	12mm
Material and surface treatment 材料および表面処理	Stainless (without surface treatment) ステンレス (表面処理なし)

Dowel pins
平行ピン



How to read Part Numbers
部品番号の見方

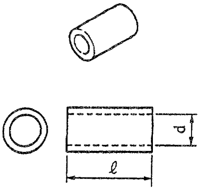
XD3-2200-082

Dowel pin
平行ピン

Nominal diameter (d) 呼び径 (d)	2.0mm
Length (ℓ) 長さ (ℓ)	8mm
Material and surface treatment 材料および表面処理	Stainless (without surface treatment) ステンレス (表面処理なし)

VI. SPACERS
スペーサ

Z. SPACERS
スペーサ



How to read Part Numbers
部品番号の見方

XZ1-1300-305

Spacer
スペーサ

Nominal diameter (d) 呼び径 (d)	3.0mm
Length (ℓ) 長さ (ℓ)	3.0mm
Material and surface treatment 材料および表面処理	Steel (zinc plated) 鋼 (亜鉛メッキ)

D1 NUMERICAL INDEX (imageRUNNER 400E/400S/330E/330S)
部品索引表

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FA2-9037-000	810 - 1
FA2-9078-000	810 - 2
FA3-8894-000	810 - 3
FA3-8908-000	830 - 1
FA3-9055-000	160 - 5A
FA4-1149-000	102 - 2
FA4-1159-000	120 - 1
FA5-1185-000	160 - 1
FA5-2965-000	810 - 4
FA6-3063-000	830 - 2
FA6-5650-000	160 - 2
FA9-1800-000	106 - 1
	210 - 1
	991 - 1
	995 - 1
FA9-3311-000	300 - 1
FA9-3312-000	300 - 2
FA9-3313-000	300 - 3
FA9-3314-000	300 - 4
FA9-3320-000	100 - 1
FA9-3321-000	100 - 2
FA9-3336-000	401 - 1
FA9-3609-000	130 - 41
FA9-3610-000	210 - 33C
FB1-0138-000	250 - 1
FB1-5816-000	640 - 1
FB1-5934-000	810 - 5
FB1-5936-000	810 - 6
FB1-6649-000	400 - 1
FB1-6657-000	400 - 2
	401 - 2
FB1-6668-000	105 - 1
FB1-6710-000	640 - 2
FB1-6718-000	640 - 3
FB1-6719-000	640 - 4
FB1-6762-000	250 - 2
FB1-6767-000	250 - 3
FB1-6820-020	810 - 7
FB1-6823-000	810 - 8
FB1-6824-000	810 - 9
FB1-6826-000	810 - 10
FB1-6833-000	830 - 3
FB1-6835-020	830 - 4
FB1-7075-000	810 - 11
FB1-7109-000	210 - 2
FB1-7157-000	100 - 3
FB1-7211-000	210 - 3
FB1-7214-000	104 - 3
FB1-7218-000	640 - 5
FB1-7219-000	640 - 6
FB1-7220-000	640 - 7
FB1-7848-000	210 - 4
	210 - 4
FB1-8014-000	250 - 4
FB1-8439-000	120 - 2
FB1-8512-000	101 - 1
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FB1-8621-000	326 - 2
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FB1-8663-000	810 - 12
FB1-8664-000	810 - 13
FB1-8665-000	810 - 14
FB1-8668-000	810 - 15
FB1-8669-000	810 - 16
FB1-8776-000	810 - 17
FB2-1947-000	400 - 3
FB2-1954-000	400 - 4
FB2-1961-000	400 - 5
FB2-2517-020	160 - 3
FB2-2518-000	160 - 4
FB2-3900-000	104 - 4
FB2-4480-000	250 - 5
FB2-7575-000	925 - 1
FB2-7576-000	925 - 2
FB3-0544-000	101 - 2
FB3-2206-000	102 - 3
FB3-2209-000	105 - 2
FB3-2212-020	103 - 1
FB3-2214-000	102 - 4
FB3-2216-000	104 - 5
FB3-2224-000	100 - 4
FB3-2232-000	210 - 5
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FB3-2242-000	100 - 6
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FB4-2774-000	100 - 32B
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FB4 – 2857 – 000	810 – 19
FB4 – 2858 – 000	810 – 20
FB4 – 2859 – 000	810 – 21
FB4 – 2860 – 000	810 – 22
FB4 – 2867 – 000	810 – 23
FB4 – 2869 – 000	810 – 24
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FB4 – 2919 – 000	350 – 18
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FB4 – 2996 – 000	130 – 22
FB4 – 2997 – 000	130 – 23
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FB4 – 3122 – 000	350 – 29
FB4 – 3123 – 000	350 – 30
FB4 – 3124 – 000	350 – 31
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FB4 – 3133 – 000	103 – 15
FB4 – 3134 – 000	103 – 16
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FB4 – 3138 – 000	100 – 35B
FB4 – 3139 – 000	100 – 35B
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FB4 – 3143 – 000	130 – 2
FB4 – 3151 – 000	130 – 27
FB4 – 3158 – 000	100 – 17
FB4 – 3161 – 000	100 – 18
FB4 – 3168 – 000	100 – 19
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FB4 – 3225 – 000	100 – 24
FB4 – 3226 – 000	100 – 25
FB4 – 3228 – 000	101 – 5
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FB4 – 3248 – 000	100 – 35G
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FB4 – 3265 – 000	326 – 9
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FB4 – 3277 – 000	100 – 30
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FB4 – 3329 – 000	120 – 17
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FB4 – 3342 – 000	341 – 11
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FB4 – 5347 – 000	310 – 19
FB4 – 5348 – 000	310 – 20
FB4 – 5349 – 000	310 – 21
FB4 – 5350 – 000	310 – 22
FB4 – 5364 – 000	310 – 23
FB4 – 5365 – 000	310 – 24
FB4 – 5366 – 000	310 – 25
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FB4 – 7871 – 000	130 – 3
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FB5 – 0254 – 000	100 – 35G
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FB5 – 0260 – 000	100 – 35G
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FF3-2964-000	110 - 6	FF5-6935-000	810 - 45	FG3-0288-000	950 -
FF3-2965-000	106 - 6	FF5-6942-000	810 - 46	FG3-0289-000	950 -
	106 - 7	FF5-6943-000	350 - 35	FG3-0290-000	950 -
FF3-2967-000	106 - 8	FF5-6944-000	350 - 36	FG3-0291-000	950 -
	110 - 7	FF5-6946-000	350 - 37	FG3-0292-000	950 -
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FF3-2970-000	210 - 21	FF5-6948-000	350 - 39	FG3-0294-000	950 -
FF3-2971-000	350 - 34	FF5-6950-000	350 - 40	FG3-0295-000	950 -
FF3-2972-000	180 - 1	FF5-6951-000	350 - 41	FG3-0296-000	950 -
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FF3-2975-000	310 - 28	FF5-6956-000	103 - 25	FG3-0298-000	950 - 1
FF3-2977-000	210 - 33A	FF5-6957-000	103 - 26	FG3-0299-000	950 - 1
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FF3-2979-000	105 - 18A	FF5-6962-000	350 - 43	FG3-0301-000	950 - 1
FF3-2980-000	103 - 22	FF5-6974-000	105 - 17	FG3-0302-000	950 - 1
FF3-2981-000	110 - 8	FF5-6975-000	100 - 31	FG3-0303-000	950 - 1
	111 - 6	FF5-6976-000	100 - 32	FG3-0304-000	950 - 1
FF3-2982-000	105 - 18B	FF5-6980-000	102 - 24	FG3-0305-000	950 - 1
FF3-2984-000	110 - 9	FF5-6987-000	810 - 47	FG3-0306-000	950 - 1
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FF3-2985-000	810 - 42	FF5-6989-000	100 - 32	FG3-0308-000	950 - 1
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FF3-2987-000	810 - 48B	FF5-6991-000	100 - 32	FG3-0310-000	950 - 2
FF3-2988-000	105 - 8	FF5-6992-000	100 - 31	FG3-0311-000	950 - 2
FF3-2989-000	105 - 9	FF5-6993-000	100 - 32	FG3-0312-000	950 - 2
FF3-2990-000	105 - 10	FF5-6994-000	101 - 8	FG3-0313-000	950 - 2
FF3-2991-000	105 - 11	FF5-6996-000	341 - 15	FG3-0495-000	950 - 2
FF3-2992-000	105 - 12	FF5-7003-000	104 - 25	FG3-0496-000	950 - 2
FF3-2993-000	105 - 13	FF5-7065-000	106 - 9	FG3-0497-000	950 - 2
FF3-2994-000	330 - 6	FF5-7086-000	326 - 10	FG3-0498-000	950 - 2
FF3-2996-000	335 - 17	FF5-7087-000	210 - 26	FG3-0499-000	950 - 2
FF3-2998-000	400 - 17	FF5-7114-000	210 - 27	FG3-0500-000	950 -
FF3-2999-000	106 - 11A	FF5-7115-000	210 - 28	FG3-0501-000	950 - 1
FF3-3000-000	991 - 8	FF5-7246-000	102 - 25	FG3-0504-000	950 - 3
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FF3-3002-000	210 - 22	FF5-9144-000	100 - 12	FG3-0635-000	950 - 1
FF3-3003-000	180 - 2	FF5-9486-000	100 - 32	FG3-0636-000	950 - 1
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FF3-3008-000	991 - 9	FG2-9502-000	950 - 1	FG5-6244-000	101 - 9
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FF3-3014-000	210 - 23	FG2-9504-140	950 - 3	FG5-6276-000	100 - 33
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FF3-3623-000	991 - 6	FG2-9636-000	130 - 28	FG6-0452-000	120 -
FF5-1187-000	830 - 8	FG2-9637-000	925 - 4	FG6-0453-030	104 - 26
FF5-1203-000	210 - 25	FG2-9638-000	925 - 5	FG6-0455-000	940 -
FF5-1458-020	102 - 19	FG2-9639-000	925 - 6	FG6-0456-000	102 - 26
FF5-4476-000	104 - 23	FG2-9640-000	925 - 7	FG6-0457-000	330 -
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FF5-4481-000	640 - 24	FG2-9693-000	460 - 2A	FG6-0462-000	810 -
FF5-4482-020	640 - 25	FG2-9694-000	460 - 1	FG6-0467-000	106 - 10
FF5-4485-000	640 - 26	FG2-9698-000	992 -	FG6-0468-000	810 - 49
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FF5-4491-000	300 - 23	FG2-9719-000	400 - 19	FG6-0472-000	350 -
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FF5-4500-000	105 - 15	FG3-0133-000	105 - 19	FG6-0482-000	335 -
FF5-4501-000	105 - 16	FG3-0135-050	950 -	FG6-0487-000	106 - 12
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FF5-4524-020	310 - 29	FG3-0137-000	105 - 18	FG6-0495-000	280 -
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FF5-4548-030	300 - 24	FG3-0142-000	105 - 18	FG6-0499-000	130 -
FF5-4550-000	640 - 27	FG3-0146-000	950 -	FG6-0502-000	130 -
FF5-4552-020	310 - 30	FG3-0147-000	950 -	FG6-0504-000	130 -
FF5-4567-000	300 - 25	FG3-0148-000	111 - 9	FG6-0505-000	995 -
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FF5-4569-020	300 - 26	FG3-0284-000	950 -	FG6-0508-000	910 -
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FG6-0537-000	110 -	FH4-5560-000	950 - IC730		310 - 36
FG6-0538-000	111 -	FH4-5952-000	950 - IC750		335 - 18
FG6-0539-000	105 - 20	FH4-5980-000	950 - IC747		350 - 47
FG6-0550-000	100 - 35	FH4-5981-000	950 - IC733		350 - 48
FG6-0551-000	100 - 35	FH4-5982-000	992 - IC7		810 - 54
FG6-0553-000	100 - 35	FH4-5983-000	950 - IC713	FH7-7422-000	640 - 29
FG6-0554-000	100 - 35	FH4-5984-000	950 - IC712	FH7-7426-000	210 - 41
FG6-0555-000	100 - 35	FH4-5985-000	950 - IC711	FH7-7457-000	110 - 15
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FG6-0557-000	100 - 35		930 - IC214	FH9-0585-000	940 - Q1604
FG6-0561-000	101 - 11		930 - IC215		940 - Q1605
FG6-0571-000	180 -	FH4-5999-000	950 - IC737		940 - Q1606
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FG6-3866-000	111 -	FH6-1472-000	250 - 11	FS2-2351-000	105 - 27
FG6-3869-000	100 - 35	FH6-1474-000	280 - 2	FS2-2783-000	104 - 32
FG6-3870-000	100 - 35	FH6-1475-000	210 - 34	FS2-2784-000	101 - 13
FG6-3872-000	100 - 35	FH6-1477-000	310 - 33	FS3-0809-000	101 - 14
FG6-3879-000	810 -	FH6-1480-000	330 - 8	FS5-0348-000	830 - 11
FG6-3881-000	810 - 50	FH6-1481-000	210 - 35	FS5-0360-000	640 - 31
FG6-3882-000	810 - 51	FH6-1482-000	350 - 46	FS5-0379-000	810 - 56
FG6-3886-000	100 - 35	FH6-1485-000	105 - 23	FS5-1209-000	120 - 20
FG6-3887-000	100 - 35		106 - 15	FS5-1212-000	640 - 32
FG6-3888-000	991 - 12	FH6-1486-000	106 - 16	FS5-1261-000	104 - 33
FH2-5006-000	110 - 11	FH6-1487-000	191 - 2	FS5-1589-000	102 - 29
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FH2-6474-000	210 - 33B	FH7-4572-000	810 - 52	FS5-2306-000	640 - 33
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	B - J 706	FH7-4574-000	810 - 53	FS5-2310-000	250 - 18
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	300 - 501		210 - 512		335 - 505
	310 - 501	XB3-6300-609	103 - 503	XD9-0103-000	335 - 29
	350 - 501		103 - 504	XD9-0104-000	120 - 28
	810 - 501		280 - 501		310 - 64
XB1-2300-605	640 - 501		330 - 501	XD9-0108-000	341 - 23
XB1-2300-606	991 - 501		335 - 501	XD9-0121-000	330 - 16
	991 - 502		350 - 503	XD9-0131-000	250 - 33
	995 - 501	XB3-6300-800	310 - 502		310 - 65
	995 - 502	XB3-6400-800	100 - 504		350 - 73
XB1-2300-607	100 - 501		101 - 501		640 - 44
	100 - 502		102 - 503	XD9-0134-000	120 - 29
	105 - 502		103 - 505	XD9-0137-000	104 - 39
	106 - 502		104 - 507		250 - 34
	106 - 503		105 - 510		310 - 66
	110 - 501		105 - 508		341 - 24
	111 - 501		210 - 513		350 - 74
	400 - 502	XB4-7200-409	130 - 503		401 - 11
XB1-2300-609	102 - 501	XB4-7300-607	310 - 503	XF9-0393-000	326 - 14
	102 - 502	XB4-7300-609	106 - 509	XF9-0568-000	310 - 67
	110 - 502		300 - 503	XF9-0659-000	210 - 55
	111 - 502		326 - 501	XF9-0661-000	335 - 30
	130 - 501		400 - 504	XG3-8012-355	310 - 68
	210 - 502	XB4-7300-806	991 - 505		341 - 25
	210 - 503		995 - 504	XG9-0094-000	350 - 75
	210 - 504	XB4-7301-609	640 - 504	XG9-0111-000	640 - 45
	300 - 502	XB4-7400-809	100 - 505	XG9-0152-000	210 - 56
	350 - 502		100 - 506	XG9-0208-000	810 - 67
	460 - 501		103 - 506	XG9-0218-000	640 - 46
	810 - 502		120 - 502	XG9-0250-000	105 - 41
	810 - 503		160 - 502		250 - 35
XB1-2300-805	640 - 502	XB4-7401-007	326 - 502	XG9-0262-000	640 - 47
XB1-2300-807	640 - 503	XB4-7401-209	300 - 504	XG9-0356-000	810 - 68
XB1-2301-009	104 - 502	XB6-1300-608	210 - 514	XZ9-0407-000	100 - 45
XB1-2301-209	460 - 502	XB6-2300-609	250 - 501	XZ9-0428-000	130 - 39
XB1-2302-009	105 - 503	XB6-2400-609	250 - 502	XZ9-0462-000	103 - 43
XB1-2400-407	210 - 505	XB6-7300-409	401 - 501	XZ9-0478-000	130 - 40
XB1-2400-409	104 - 503	XB6-7300-607	110 - 507		
XB1-2400-606	104 - 504		111 - 506		
	210 - 506	XB6-7300-609	210 - 515		
XB1-2400-607	104 - 505	XB6-7300-805	111 - 507		
XB1-2400-609	105 - 504	XB6-7400-605	104 - 508		
	110 - 503	XB6-7400-609	810 - 514		
	111 - 503	XB6-7400-809	210 - 516		
	210 - 507		250 - 503		
	810 - 504	XB6-7501-209	104 - 509		
	810 - 505	XB7-1030-149	400 - 505		
	810 - 506	XD1-1106-234	250 - 504		
	810 - 507	XD1-1106-235	101 - 502		
	830 - 501		830 - 502		
XB1-2400-803	110 - 504	XD1-1108-225	310 - 504		
XB1-2400-809	120 - 501	XD1-1108-228	341 - 502		
	810 - 508	XD1-4200-402	110 - 508		
XB1-2401-406	810 - 509	XD2-1100-242	335 - 502		
XB1-2401-607	999 - 501		810 - 515		
XB1-2401-609	104 - 506	XD2-1100-322	830 - 503		
	160 - 501	XD2-1100-502	101 - 503		
XB1-2402-009	103 - 502		330 - 502		
	105 - 505		335 - 503		
	110 - 505		830 - 504		
	111 - 504	XD2-1100-642	103 - 507		
	210 - 508		104 - 510		
	210 - 509		104 - 511		
XB1-2402-509	100 - 503		210 - 517		
	105 - 506		210 - 518		
	106 - 504		335 - 504		
XB1-2404-509	810 - 510		810 - 516		
XB1-3400-806	130 - 502		830 - 505		
XB2-2300-607	810 - 511	XD2-2100-402	310 - 505		
XB2-5300-609	400 - 503	XD2-2100-502	326 - 503		
XB2-7300-607	106 - 505	XD2-2100-602	120 - 503		
	106 - 506	XD2-2100-802	101 - 504		
	341 - 501		250 - 505		
XB2-7400-606	105 - 507		310 - 506		

D2 NUMERICAL INDEX (Multi PDL Printer Board-H1)
部品索引表

PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.
FB3-2351-000	F90 - 1				
	F90 - 2				
FB4-3334-000	F10 - 1				
FE1-5020-000	F90 - 3				
FE1-5021-000	F90 - 4				
FE1-5022-000	F90 - 5				
FE1-5023-000	F90 - 6				
FE1-5036-000	F90 - 7				
FE1-5044-000	F90 - 8				
FE1-5046-000	F90 - 9				
FE1-5047-000	F90 - 9				
FE1-5048-000	F90 - 9				
FE1-5049-000	F90 - 9				
FE1-5050-000	F90 - 9				
FG2-9717-000	F90 - 10				
FG3-0138-000	F95 -				
FH2-6472-000	F95 - 1				
	FB - J8103				
	FB - J8203				
FH2-6473-000	F95 - 2				
	FB - J8102				
	FB - J8202				
FH4-6005-000	F95 - IC 775				
FH9-0634-000	F95 - IC8231				
VD7-0621-001	F95 - FU8102				
VD7-0622-001	F95 - FU8101				
WS9-0104-000	F90 - 11				
XB1-2400-606	F10 - 501				
XB6-7300-407	F90 - 501				

D3 NUMERICAL INDEX (Battery Board-A1)
部品索引表 (バッテリー ボード・A1)

PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.
FG6－3888－000	F97　－				

D4 NUMERICAL INDEX (Super G3 FAX Unit-E1)
部品索引表 (スーパー G3 ファクス ユニット・E1)

PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.
FA9-1800-000	G10 - 1				
FB3-2553-000	G10 - 2				
FB4-3014-000	G10 - 3				
FB4-3015-000	G10 - [illegible]				
FB4-3033-000	G10 - [illegible]				
FB4-3035-000	G10 - 6				
FB4-6724-000	G10 - [illegible]				
FF3-2889-000	G10 - 8				
FF3-2891-000	G10 - 9				
FF3-3000-000	G10 - 10				
FF3-3008-000	G10 - 11				
FG2-9517-000	G10 - 12				
FG2-9526-000	G10 - 13				
FG2-9698-000	G90 -				
FG6-3888-000	G10 - 14				
FH2-6341-000	G90 - 1				
	GB - J 1R				
	GB - J8302				
FH4-5982-000	G90 - IC7				
FH6-3857-000	G10 - 15				
FH9-0186-000	G90 - CP1				
	G90 - CP2				
HG5-1039-000	G90 - 2				
HH2-2484-000	G10 - 16				
VD7-0623-000	G90 - FU1				
VS1-5730-007	GB - J1201				
VS1-6303-002	GB - J 454				
VS3-5080-002	GB - J8322				
VS3-5080-005	GB - J 3L				
	GB - J 3R				
VS3-5080-008	GB - J8321				
VS3-5083-007	GB - J8001				
VS4-0002-002	GB - J 499				
WG1-0373-000	G90 - LED1				
WS3-5160-000	GB - J8001				
WS3-5301-000	GB - J1201				
WS3-5570-000	GB - J 454				
WS4-0217-000	GB - J 499				
WS9-5038-000	G10 - 17				
WT1-5155-000	GB - J 3L				
	GB - J 3R				
	GB - J8321				
	GB - J8322				
WT1-5252-000	GB - J 2L				
	GB - J 2R				
WT2-5565-000	G10 - 10A				
	G10 - 11A				
XA9-0591-000	G10 - 18				
XB1-2300-606	G10 - 501				
	G10 - 502				
	G10 - 503				
XB2-7400-607	G10 - 504				
XB4-7300-806	G10 - 505				

D5 NUMERICAL INDEX (Expansion Board Base Unit-C1)
部品索引表 (基本拡張キット・C1)

PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.
FA9-1800-000	G11 - 1				
FB3-2553-000	G11 - 2				
FB4-3014-000	G11 - 3				
FB4-3015-000	G11 - 4				
FF3-3000-000	G11 - 5				
FF3-3008-000	G11 - 6				
FG2-9526-000	G11 - 7				
FG6-0505-000	G11 -				
VS1-5730-007	GB - J1201				
VS1-6303-002	GB - J 454				
VS3-5080-002	GB - J8322				
VS3-5083-007	GB - J8001				
WS3-5160-000	GB - J8001				
WS3-5301-000	GB - J1201				
WS3-5570-000	GB - J 454				
WT1-5155-000	GB - J8322				
WT2-5565-000	G11 - 5A				
	G11 - 6A				
XB1-2300-606	G11 - 501				
	G11 - 502				
XB2-7400-607	G11 - 503				
XB4-7300-806	G11 - 504				

D6 NUMERICAL INDEX (Super G3 FAX Board-F1)
部品索引表 (スーパー G3 ファクス ボード・F1)

PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.
FB4-3033-000	G12 - 1				
FB4-3035-000	G12 - 2				
FB4-6724-000	G12 - 3				
FB4-6728-000	G12 - 3				
FF3-2889-000	G12 - 4				
FF3-2891-000	G12 - 5				
FF3-3622-000	G12 - 5				
FF3-3623-000	G12 - 4				
FG2-9517-000	G12 - 6				
FG2-9698-000	G92 -				
FG3-0232-000	G92 -				
FG6-3888-000	G12 - 7				
FH2-6341-000	G92 - 1				
	GB - J 1R				
	GB - J8302				
FH4-5982-000	G92 - IC7				
FH6-3857-000	G12 - 8				
FH9-0186-000	G92 - CP1				
	G92 - CP2				
HG1-4268-000	G92 - 2				
HG5-1039-000	G92 - 2				
HH2-2484-000	G12 - 9				
VD7-0623-000	G92 - FU1				
VS3-5080-005	GB - J 3L				
	GB - J 3R				
VS3-5080-008	GB - J8321				
VS4-0002-002	GB - J 499				
WG1-0373-000	G92 - LED1				
WS4-0217-000	GB - J 499				
WS9-5038-000	G12 - 10				
WT1-5155-000	GB - J 3L				
	GB - J 3R				
	GB - J8321				
WT1-5252-000	GB - J 2L				
	GB - J 2R				
XA9-0591-000	G12 - 11				
XB1-2300-606	G12 - 501				
XB2-7400-607	G12 - 502				

D7 NUMERICAL INDEX (Multi Port Kit-A1)
部品索引表 (マルチ ポート キット・A1)

PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.
FG2-9697-000	G95 - 1				
FH2-6341-000	G95 - 2				
	GB - J 1R				
	GB - J8308				
HG5-1039-000	G95 - 3				
HH2-2484-000	G95 - 4				

D8 NUMERICAL INDEX (Handset-C1)
部品索引表 (ハンドセット・C1)

PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.
FB3－3177－020	G97 － 1				
FH2－6471－000	G97 － 2				
FH2－6730－000	G97 － 2				
HH7－2104－000	G97 － 3				
HH7－2124－000	G97 － 3				
XB1－2401－607	G97 － 501				

D9 NUMERICAL INDEX (Network Interface Board-C1)
部品索引表 (ネットワーク インターフェーズ ボード・C1)

PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.
FC2-9589-000	N90 - 1				
FF3-3487-000	N90 - IC10				
FF3-3488-000	N90 - IC11				
FG3-0121-000	N90 -				
VD7-1861-301	N90 - FU1				
WG1-5593-000	N90 - LED1				
	N90 - LED2				
	N90 - LED3				
	N90 - LED5				
WG1-5594-000	N90 - LED6				

D10 NUMERICAL INDEX (LIPS Printer Board-D1)
部品索引表 (LIPS プリンタ ボード・D1)

PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.
FB3-2351-000	U90 - 1				
FB4-3326-000	U10 - 1				
FF3-3474-000	U90 - 3A				
FG2-9717-000	U90 - 2				
FG3-0117-000	U90 - 3				
FG3-0138-000	U95 -				
FG6-0522-000	U90 -				
FH2-6472-000	U95 - 1				
	UB - J8103				
	UB - J8203				
FH2-6473-000	U95 - 2				
	UB - J8102				
	UB - J8202				
FH4-3729-000	U90 - IC 4				
FH4-6005-000	U95 - IC 775				
FH4-6012-000	U90 - IC23				
FH9-0634-000	U95 - IC8231				
RH2-5275-000	U90 - J3				
	U90 - J4				
	U90 - J5				
RH2-5391-000	U90 - J2				
RH4-5372-000	U90 - IC 2				
VD7-0621-001	U95 - FU8102				
VD7-0622-001	U95 - FU8101				
WS9-0104-000	U90 - 4				
XB1-1301-007	U90 - 501				
XB1-2300-606	U90 - 502				
XB1-2400-606	U10 - 501				
XB4-7400-607	U90 - 503				
XB6-7300-605	U90 - 504				

D11 NUMERICAL INDEX (SCSI Interface Board-D1)
部品索引表 (SCSI インターフェース ボード・D1)

PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.	PART NUMBER	FIGURE & KEY NO.
FF3－3637－000	Y90 － 1				
FG6－0494－000	Y90 －				
FH4－5216－000	Y90 － IC116				
FH4－5844－000	Y90 － IC138				
FH4－5846－000	Y90 － IC145				
VD5－0221－001	Y90 － FU 10				
WD9－0044－000	Y90 － FU101				
WG1－5309－000	Y90 － LED101				
WS1－5531－000	Y90 － 2				
XB1－2300－606	Y90 － 501				

〒302-8501
茨城県取手市白山7−5−1

キヤノン株式会社
映像事務機TS推進部
映像事務機TS推進1課

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